

# **TACHS Prep Book 2025–2026**

## **Part I — Reading & Written Expression (ELA)**

### **Reading Comprehension Foundations**

Question 1. When reading a passage, what is the most effective first step to understanding its content?

- A) Memorize all the specific dates and names mentioned.
- B) Identify the main subject and what the author is generally saying about it.
- C) Count the number of paragraphs in the passage.
- D) Look up every unfamiliar word in a dictionary before finishing the passage.

Correct Answer: B

Explanation: Identifying the main subject and the author's general point provides a framework for understanding all the other details. Memorizing dates (Option A) or counting paragraphs (Option C) doesn't lead to comprehension. Stopping to look up every word (Option D) can interrupt the flow of reading and make it harder to grasp the overall message.

Question 2. A supporting detail in a paragraph serves which primary function?

- A) To introduce a completely new topic unrelated to the main idea.
- B) To provide evidence, examples, or explanations that reinforce the main idea.
- C) To state the author's personal opinion without any evidence.
- D) To summarize the entire passage in a single sentence.

Correct Answer: B

Explanation: Supporting details are the backbone of a paragraph; they exist to build upon and prove the main idea, making it more understandable and credible. They do not introduce new topics (Option A) or merely state unsupported opinions (Option C).

Question 3. The term 'active reading' best describes which of the following actions?

- A) Reading a text quickly without stopping to think.
- B) Listening to an audiobook while doing other tasks.
- C) Engaging with the text by asking questions, making connections, and taking notes.

D) Reading only the first and last sentence of each paragraph.

Correct Answer: C

Explanation: Active reading is a process of deep engagement with the material. It involves thinking critically about the content, questioning the author's points, and making personal connections, which aids retention and comprehension far more than passive or speed-reading techniques.

Question 4. What is the relationship between a topic and a main idea?

A) They are the same thing.

B) The topic is a specific detail, and the main idea is the general subject.

C) The topic is the broad, general subject, while the main idea is the specific message about that topic.

D) The topic is the author's purpose, and the main idea is the evidence.

Correct Answer: C

Explanation: The topic is the word or phrase that everything in the text is about (e.g., 'climate change'). The main idea is the complete thought the author is expressing about that topic (e.g., 'Climate change is primarily caused by human activity').

Question 5. When you encounter a word you don't know while reading, what is the best initial strategy to use?

A) Immediately stop and find a dictionary.

B) Skip the entire sentence and continue reading.

C) Use the surrounding words and sentences to infer its meaning.

D) Assume the word is not important to the passage's meaning.

Correct Answer: C

Explanation: Using context clues is the most efficient initial strategy. The context often provides enough information to make an educated guess about the word's meaning without breaking your reading rhythm.

## **Main Idea, Purpose, and Supporting Details**

Question 6. An article describes the invention of the telephone, detailing Alexander Graham Bell's life, his experiments, and the first successful transmission of speech. What is the author's primary purpose?

- A) To persuade readers to buy a new type of phone.
- B) To entertain readers with a fictional story about an inventor.
- C) To inform readers about the history of the telephone's invention.
- D) To argue that other inventors were more important than Bell.

Correct Answer: C

Explanation: The passage is presenting factual, historical information about a specific event and person. This indicates the author's purpose is to inform the reader. There is no element of persuasion (Option A), fiction (Option B), or argument (Option D) mentioned.

Question 7. A paragraph begins with the sentence, 'The Sahara Desert is a place of extreme conditions.' Which of the following sentences would be the most logical supporting detail for this main idea?

- A) Many people visit the Sahara Desert on vacation.
- B) The desert is located in Northern Africa.
- C) Temperatures can soar to over 120 degrees Fahrenheit during the day and drop below freezing at night.
- D) The Sahara Desert is the largest hot desert in the world.

Correct Answer: C

Explanation: The main idea is about 'extreme conditions.' The sentence in Option C provides a perfect example of this by describing extreme temperature fluctuations. Options B and D provide factual information but do not directly support the idea of 'extreme conditions' as strongly as Option C does.

Question 8. If a paragraph's main idea is that 'learning to play a musical instrument has many cognitive benefits,' which of the following is NOT a relevant supporting detail?

- A) Studies show that musicians have better memory recall.
- B) Playing an instrument can improve coordination and motor skills.
- C) Musical instruments can be very expensive to purchase and maintain.

D) Learning music has been linked to higher scores in math and science.

Correct Answer: C

Explanation: The main idea is about cognitive, or brain-related, benefits. Options A, B, and D all provide examples of such benefits. Option C, which discusses the cost of instruments, is a practical consideration but not a cognitive benefit, so it does not directly support the stated main idea.

Question 9. An article's title is 'The Benefits of a Healthy Diet.' What is the most likely purpose of this article?

- A) To describe the author's favorite foods.
- B) To persuade readers to adopt a healthier eating lifestyle.
- C) To provide a list of all restaurants in a city.
- D) To entertain with stories about cooking disasters.

Correct Answer: B

Explanation: A title focused on 'benefits' suggests that the author will be presenting positive arguments and evidence to convince, or persuade, the reader of the value of a healthy diet.

Question 10. Read the following sentence: 'Although dogs are loyal companions, they require a great deal of time, money, and attention.' Which of the following best states the main idea?

- A) Dogs are the best pets.
- B) Owning a dog is a significant responsibility.
- C) Dogs are very expensive.
- D) Dogs are more loyal than other animals.

Correct Answer: B

Explanation: The sentence acknowledges a positive trait (loyalty) but contrasts it with the significant requirements of time, money, and attention. The overarching message is that dog ownership is a major commitment.

### **Inference and Author's Tone**

Question 11. A character is described as having 'a perpetually furrowed brow, slumped shoulders, and a constant, heavy sigh.' The author's tone in this description is likely intended to evoke a feeling of what?

- A) Joy and excitement
- B) Anger and aggression
- C) Sympathy and sadness
- D) Comedy and lightheartedness

Correct Answer: C

Explanation: The physical descriptions—a furrowed brow, slumped shoulders, and sighing—are all classic indicators of worry, sadness, or weariness. The author uses these details to create a somber tone and make the reader feel sympathy for the character.

Question 12. An author writes an article about a new law using words like 'disastrous,' 'ill-conceived,' and 'a threat to our future.' The author's tone can best be described as what?

- A) Neutral and objective
- B) Critical and disapproving
- C) Hopeful and optimistic
- D) Confused and uncertain

Correct Answer: B

Explanation: The author's word choice is strongly negative. Words like 'disastrous' and 'threat' clearly convey a tone of disapproval and criticism toward the new law. An objective tone (Option A) would use neutral language.

Question 13. A student arrives late to class with a torn backpack and mud on their shoes. The teacher says, 'Well, it looks like you've had quite an adventure this morning.' What can you infer from the teacher's statement?

- A) The teacher is angry and will punish the student immediately.
- B) The teacher believes the student was on a planned trip.
- C) The teacher is making a lighthearted or sarcastic comment about the student's disheveled appearance.

D) The teacher wants the student to tell a long story about their morning.

Correct Answer: C

Explanation: An inference is an educated guess based on evidence. The student's appearance suggests a difficult morning. The teacher's comment, calling it an 'adventure,' is likely an understatement or a gentle, possibly sarcastic, way of acknowledging the situation without being immediately accusatory.

Question 14. If a story begins with 'The old house groaned under the weight of the relentless storm, its windows rattling like skeletal teeth,' what is the author's tone?

- A) Humorous
- B) Ominous
- C) Romantic
- D) Nostalgic

Correct Answer: B

Explanation: The author uses words like 'groaned,' 'relentless storm,' and 'skeletal teeth' to create a sense of dread and foreboding. This establishes an ominous, or threatening, tone.

Question 15. A restaurant review states, 'The food was, technically, edible.' What can the reader infer about the reviewer's opinion of the food?

- A) The reviewer greatly enjoyed the food.
- B) The reviewer found the food to be exceptionally well-prepared.
- C) The reviewer is providing a neutral, factual description.
- D) The reviewer did not like the food but is using understatement.

Correct Answer: D

Explanation: The phrase 'technically, edible' is a form of understatement. It implies that the food met the bare minimum standard of being eatable but was not enjoyable or of good quality.

#### Structure and Organization of Passages

Question 16. A passage that explains the steps for baking a cake, from mixing the ingredients to decorating the final product, is organized using which text structure?

- A) Cause and effect
- B) Compare and contrast
- C) Chronological order
- D) Problem and solution

Correct Answer: C

Explanation: The passage describes a process in the order that the steps must be performed. This is known as chronological, or sequential, order.

Question 17. An author begins an article by describing the problem of plastic pollution in the oceans and then proposes several methods for reducing waste and cleaning up the water. This passage is structured as what?

- A) Spatial order
- B) Problem and solution
- C) Descriptive
- D) Chronological order

Correct Answer: B

Explanation: The structure directly follows the problem-and-solution format. It first identifies a problem (plastic pollution) and then outlines one or more solutions (reducing waste, cleanup methods).

Question 18. A travel brochure describes a famous landmark by detailing its appearance from the outside, then moving to the main lobby, and finally describing the view from the top floor. What organizational structure is being used?

- A) Cause and effect
- B) Order of importance
- C) Spatial order
- D) Compare and contrast

Correct Answer: C

Explanation: Spatial order arranges information according to how things are positioned in a physical space. The description moves from the exterior to the interior and then upward, following a clear spatial path.

Question 19. An essay argues that the invention of the printing press was the single most important event leading to the Renaissance. The author supports this by explaining how the printing press allowed for the wide dissemination of ideas, which in turn fueled artistic and scientific growth. This is an example of which text structure?

- A) Chronological order
- B) Cause and effect
- C) Problem and solution
- D) Descriptive

Correct Answer: B

Explanation: The essay is structured around a cause (the printing press) and its effects (dissemination of ideas, leading to the Renaissance). This structure is used to explain why or how something happened.

Question 20. A passage discusses the similarities and differences between alligators and crocodiles, covering their snout shape, habitat, and temperament. The primary text structure is what?

- A) Compare and contrast
- B) Sequential order
- C) Cause and effect
- D) Spatial order

Correct Answer: A

Explanation: The passage's purpose is to highlight what is similar and what is different between two subjects (alligators and crocodiles), which is the definition of a compare and contrast structure.

## Vocabulary in Context

Question 21. The scientist was meticulous in her research, checking every measurement twice and recording her data with extreme precision. In this sentence, the word 'meticulous' most nearly means what?

- A) Careless and sloppy
- B) Quick and efficient
- C) Brave and daring
- D) Careful and thorough

Correct Answer: D

Explanation: The context clues 'checking every measurement twice' and 'extreme precision' strongly suggest that the scientist was being very careful and detailed in her work. This aligns with the meaning of meticulous.

Question 22. Despite the initial setback, the team was resilient and came back to win the championship in the final minutes of the game. What does the word 'resilient' mean here?

- A) Able to recover quickly from difficulties.
- B) Lacking in skill or talent.
- C) Prone to giving up easily.
- D) Overly confident and arrogant.

Correct Answer: A

Explanation: The sentence shows the team faced a 'setback' but then 'came back to win.' This action of overcoming a challenge demonstrates resilience, which is the ability to bounce back from tough situations.

Question 23. The politician's ambiguous answer left the reporters wondering what his actual position was on the issue. The word 'ambiguous' means what?

- A) Clear and direct
- B) Open to more than one interpretation
- C) Angry and hostile
- D) Quiet and thoughtful

Correct Answer: B

Explanation: The context that the reporters were left 'wondering what his actual position was' indicates that the answer was unclear and could be understood in multiple ways. This is the definition of ambiguous.

Question 24. The ancient artifact was a tangible link to the past, something historians could actually hold and study. In this context, 'tangible' means what?

- A) Unimportant
- B) Perceptible by touch
- C) Mysterious
- D) Valuable

Correct Answer: B

Explanation: The clue 'something historians could actually hold' directly points to the meaning of tangible, which refers to something that is physical and can be touched.

Question 25. Her decision to donate her savings to the charity was a truly altruistic act. The word 'altruistic' most nearly means what?

- A) Selfish
- B) Unselfish and concerned for others
- C) Complicated
- D) Regretful

Correct Answer: B

Explanation: Donating one's savings to a charity is an act of generosity and concern for the well-being of others, which defines altruism.

### Prefixes, Roots, and Suffixes

Question 26. The prefix 'sub-' in the word 'submarine' means what?

- A) Over
- B) Against

C) Under

D) Around

Correct Answer: C

Explanation: The prefix 'sub-' means under or below. A submarine is a vessel that travels under the surface of the water.

Question 27. The root 'port' in words like 'transport,' 'portable,' and 'export' relates to what?

A) Seeing

B) Carrying

C) Hearing

D) Breaking

Correct Answer: B

Explanation: The Latin root 'port' means to carry. Transport means to carry across, portable means able to be carried, and export means to carry out (of a country).

Question 28. The suffix '-ology' in 'biology' or 'psychology' indicates what?

A) The study of something

B) A person who does something

C) The state of being something

D) The result of an action

Correct Answer: A

Explanation: The suffix '-ology' comes from the Greek 'logos,' meaning 'word' or 'study.' It is used to denote a field of study.

Question 29. In the word 'monologue,' the prefix 'mono-' suggests that something is being done by how many people?

A) Two

B) Three

C) Many

D) One

Correct Answer: D

Explanation: The prefix 'mono-' means one or single. A monologue is a long speech by one person.

Question 30. The root 'rupt' means 'to break.' Which of the following words means 'to break in between' a conversation?

A) Erupt

B) Corrupt

C) Interrupt

D) Bankrupt

Correct Answer: C

Explanation: The prefix 'inter-' means 'between.' Therefore, to interrupt is to break in between something, such as a conversation.

#### High-Frequency TACHS Vocabulary List

Question 31. Which word is a synonym for 'abundant'?

A) Scarce

B) Plentiful

C) Empty

D) Difficult

Correct Answer: B

Explanation: Abundant means existing or available in large quantities. Plentiful is the best synonym. Scarce is an antonym.

Question 32. To 'collaborate' means to do what?

A) Work alone

B) Compete against others

C) Work jointly on an activity

D) Give up easily

Correct Answer: C

Explanation: Collaboration is the act of working with someone to produce or create something.

Question 33. An 'innovative' idea is one that is what?

A) Old and traditional

B) Featuring new methods; original and creative

C) Unpopular and disliked

D) Simple and easy to understand

Correct Answer: B

Explanation: Innovation refers to something new, original, and advanced.

Question 34. If a person is 'skeptical,' they are what?

A) Not easily convinced; having doubts

B) Quick to believe anything

C) Full of energy and enthusiasm

D) Calm and relaxed

Correct Answer: A

Explanation: A skeptical person is inclined to question or doubt accepted opinions.

Question 35. What does the word 'verify' mean?

A) To change or alter

B) To make sure or demonstrate that something is true or accurate

C) To hide or conceal

D) To create a fictional story

Correct Answer: B

Explanation: To verify is to confirm the truth or accuracy of something.

### Grammar and Usage Essentials

Question 36. Which of the following sentences is grammatically correct?

- A) Me and my friend went to the store.
- B) My friend and I went to the store.
- C) My friend and me went to the store.
- D) I and my friend went to the store.

Correct Answer: B

Explanation: When you are part of the subject, you should use the subject pronoun 'I.' It is also polite to mention the other person first. To check, remove the other person: 'I went to the store' is correct, while 'Me went to the store' is not.

Question 37. Choose the correct word to complete the sentence: 'The dog wagged \_\_\_ tail excitedly.'

- A) its
- B) it's
- C) its'
- D) their

Correct Answer: A

Explanation: 'Its' is the possessive form of 'it.' 'It's' is a contraction for 'it is.' 'Its" is not a word. 'Their' is a plural possessive pronoun.

Question 38. Which sentence uses the correct form of the verb?

- A) The flock of birds fly south for the winter.
- B) The flock of birds flies south for the winter.
- C) The flock of birds are flying south for the winter.
- D) The flock of birds were flying south for the winter.

Correct Answer: B

Explanation: The subject of the sentence is 'flock,' which is a singular collective noun. Therefore, it requires the singular verb 'flies.'

Question 39. 'She did her homework very \_\_\_\_.' Which word correctly completes the sentence?

- A) good
- B) well
- C) best
- D) more good

Correct Answer: B

Explanation: 'Well' is an adverb that modifies the verb 'did.' 'Good' is an adjective and cannot be used to describe how an action was performed.

Question 40. Which of the following is a complete sentence?

- A) Running through the park.
- B) After she finished her homework.
- C) The cat slept.
- D) Because the sun was shining.

Correct Answer: C

Explanation: A complete sentence must have a subject ('The cat') and a verb ('slept') and express a complete thought. The other options are sentence fragments.

### Sentence Types and Agreement Rules

Question 41. 'Neither the students nor the teacher \_\_\_\_ ready for the fire drill.'

- A) was
- B) were
- C) are
- D) have been

Correct Answer: A

Explanation: When subjects are joined by 'neither/nor' or 'either/or,' the verb agrees with the subject that is closer to it. In this case, 'teacher' is singular, so the singular verb 'was' is correct.

Question 42. 'Each of the players \_\_\_\_ a new uniform.'

- A) need
- B) are needing
- C) needs
- D) have

Correct Answer: C

Explanation: The pronoun 'each' is singular and requires a singular verb. Therefore, 'needs' is the correct verb form.

Question 43. 'The boy who has the most toys wins the game.' What type of sentence is this?

- A) Simple
- B) Compound
- C) Complex
- D) Compound-Complex

Correct Answer: C

Explanation: This is a complex sentence because it contains one independent clause ('The boy wins the game') and one dependent clause ('who has the most toys').

Question 44. Which of the following is a compound sentence?

- A) The rain fell, and the wind blew.
- B) The rain fell while the wind blew.
- C) The falling rain and the blowing wind were cold.
- D) The rain fell.

Correct Answer: A

Explanation: A compound sentence consists of two or more independent clauses joined by a coordinating conjunction (like 'and,' 'but,' 'or'). 'The rain fell' and 'the wind blew' are both independent clauses.

Question 45. 'There \_\_\_ several reasons why I cannot attend the meeting.'

- A) is
- B) was
- C) are
- D) has been

Correct Answer: C

Explanation: The subject of the sentence is 'reasons,' which is plural. Therefore, the plural verb 'are' is required. In sentences beginning with 'There is/are,' the verb agrees with the noun that follows it.

#### Verb Tense and Consistency

Question 46. Which sentence demonstrates correct verb tense consistency?

- A) She walked to the store and buys a gallon of milk.
- B) She walks to the store and bought a gallon of milk.
- C) She walked to the store and bought a gallon of milk.
- D) She will walk to the store and bought a gallon of milk.

Correct Answer: C

Explanation: Both actions happened in the past, so both verbs should be in the past tense ('walked' and 'bought'). The other options incorrectly mix different tenses.

Question 47. By the time the guests arrive, the chef \_\_\_\_\_ the meal.

- A) will prepare
- B) prepared
- C) will have prepared
- D) prepares

Correct Answer: C

Explanation: This sentence requires the future perfect tense ('will have prepared') to show that an action will be completed before another future action (the guests arriving).

Question 48. Yesterday, I \_\_\_ my bike to the library.

- A) ride
- B) rode
- C) have ridden
- D) will ride

Correct Answer: B

Explanation: The word 'yesterday' indicates the action took place in the past. 'Rode' is the simple past tense of 'ride.'

Question 49. The team \_\_\_ every game so far this season.

- A) has won
- B) won
- C) will win
- D) wins

Correct Answer: A

Explanation: The phrase 'so far this season' indicates an action that started in the past and is continuing into the present. This requires the present perfect tense ('has won').

Question 50. When I was a child, I always \_\_\_ to go to the beach.

- A) want
- B) wanted
- C) have wanted
- D) will want

Correct Answer: B

Explanation: The phrase 'When I was a child' establishes a past context. Therefore, the simple past tense 'wanted' is the correct choice to describe a recurring action in the past.

### Modifiers and Parallel Structure

Question 51. Which sentence has a dangling modifier?

- A) After finishing my homework, I watched television.
- B) Running for the bus, my backpack fell off.
- C) The dog, wagging its tail, greeted me at the door.
- D) To succeed in school, you must study hard.

Correct Answer: B

Explanation: A dangling modifier is a phrase that doesn't logically modify anything in the sentence. In option B, it sounds as if the backpack was running for the bus. It should be rewritten as: 'As I was running for the bus, my backpack fell off.'

Question 52. Which sentence demonstrates correct parallel structure?

- A) She enjoys hiking, to swim, and riding her bike.
- B) She enjoys hiking, swimming, and to ride her bike.
- C) She enjoys hiking, swimming, and riding her bike.
- D) She enjoys to hike, swimming, and bike riding.

Correct Answer: C

Explanation: Parallel structure means using the same pattern of words to show that two or more ideas have the same level of importance. In this case, all items in the list are gerunds (verbs ending in '-ing'): 'hiking,' 'swimming,' and 'riding.'

Question 53. Choose the best way to rewrite the following sentence: 'The car was not only economical but also it was fun to drive.'

- A) The car was not only economical, but also fun to drive.
- B) The car was not only economical, but it was also fun to drive.
- C) The car was economical and also it was fun to drive.

D) The car was not only economical but fun to drive also.

Correct Answer: A

Explanation: The structure 'not only... but also...' should connect parallel elements. In this case, it connects two adjectives: 'economical' and 'fun.' Option A provides the most concise and parallel construction.

Question 54. 'The teacher instructed the students to read the chapter, \_\_\_\_\_ the questions, and to turn in their work.'

A) answering

B) to answer

C) answer

D) they should answer

Correct Answer: B

Explanation: To maintain parallel structure with 'to read' and 'to turn in,' the infinitive form 'to answer' is required.

Question 55. 'Peering through the microscope, the tiny cells were visible.' How should this sentence be corrected?

A) The tiny cells were visible, peering through the microscope.

B) Peering through the microscope, I could see the tiny cells.

C) The tiny cells, peering through the microscope, were visible.

D) The sentence is correct as is.

Correct Answer: B

Explanation: The original sentence has a dangling modifier; it implies the cells were peering through the microscope. The corrected version clarifies who was performing the action ('I').

## Punctuation and Mechanics

Question 56. Which sentence is punctuated correctly?

A) The three primary colors are: red, blue, and yellow.

- B) The three primary colors are red, blue, and yellow.
- C) The three primary colors are, red, blue, and yellow.
- D) The three primary colors are red blue and yellow.

Correct Answer: B

Explanation: A colon should not be used after a verb like 'are' to introduce a list. Commas are needed to separate the items in the list.

Question 57. Where should the apostrophe be placed in the following sentence? 'The childrens toys were scattered all over the floor.'

- A) childrens'
- B) children's
- C) child'rens
- D) No apostrophe is needed.

Correct Answer: B

Explanation: 'Children' is a plural noun that does not end in 's.' To show possession, you add an apostrophe and an 's.'

Question 58. Which sentence uses commas correctly?

- A) My brother, who lives in Ohio, is a doctor.
- B) My brother who lives in Ohio is a doctor.
- C) My brother, who lives in Ohio is a doctor.
- D) My brother who lives in Ohio, is a doctor.

Correct Answer: A

Explanation: The clause 'who lives in Ohio' is a non-restrictive (non-essential) clause, meaning it adds extra information but is not necessary to identify which brother is being discussed (assuming the speaker has only one brother). Non-restrictive clauses must be set off by commas.

Question 59. 'I am going to the party,' she said, '\_\_\_ you coming with me?'

- A) . Are

B) ? are

C) , are

D) ? Are

Correct Answer: D

Explanation: The dialogue is a question, so it must end with a question mark inside the quotation marks. The word 'Are' must be capitalized because it begins a new sentence.

Question 60. Which of the following requires capitalization?

A) the name of a season (summer)

B) the name of a planet (earth)

C) the title of a person when used with their name (president lincoln)

D) the name of a school subject (math)

Correct Answer: C

Explanation: Titles like 'President,' 'Doctor,' or 'Senator' are capitalized when they come directly before a name. Seasons, school subjects (unless they are languages), and the word 'earth' (unless referring to the planet in a list with other planets) are generally not capitalized.

### Common Confused Words

Question 61. Please \_\_\_ this gift on my behalf.

A) except

B) accept

C) axept

D) expect

Correct Answer: B

Explanation: 'Accept' means to receive. 'Except' means to exclude.

Question 62. The rain had a negative \_\_\_ on our picnic plans.

A) affect

- B) effect
- C) infect
- D) effective

Correct Answer: B

Explanation: 'Effect' is a noun meaning 'a result.' 'Affect' is a verb meaning 'to influence.' The rain had a result on the plans.

Question 63. I would rather walk to school \_\_\_\_ take the bus.

- A) then
- B) than
- C) them
- D) they're

Correct Answer: B

Explanation: 'Than' is used for comparisons. 'Then' refers to time.

Question 64. The library is over \_\_\_\_.

- A) their
- B) there
- C) they're
- D) theya're

Correct Answer: B

Explanation: 'There' refers to a place. 'Their' is a possessive pronoun. 'They're' is a contraction for 'they are.'

Question 65. Can you give me some \_\_\_\_ on how to solve this problem?

- A) advise
- B) advice
- C) advize

D) addvice

Correct Answer: B

Explanation: 'Advice' is a noun meaning 'guidance' or 'recommendations.' 'Advise' is a verb meaning 'to offer suggestions.'

#### Practice Review: Reading & Language

Question 66. A passage argues that school uniforms reduce peer pressure and improve focus in the classroom. The author's primary purpose is to do what?

A) Entertain

B) Inform

C) Persuade

D) Describe

Correct Answer: C

Explanation: The author is presenting an argument with the goal of convincing the reader to agree with a particular viewpoint, which is the purpose of persuasion.

Question 67. 'The old mariner, his face a roadmap of wrinkles from a thousand voyages, gazed at the horizon.' The tone of this sentence is best described as what?

A) Comical

B) Anxious

C) Reflective

D) Angry

Correct Answer: C

Explanation: The imagery of a 'roadmap of wrinkles' and the act of gazing at the horizon suggest a tone of deep thought, experience, and reflection on a long life.

Question 68. Which of the following sentences is grammatically correct and punctuated properly?

A) Each of the girls brought their own lunch.

B) Each of the girls brought her own lunch.

- C) Each of the girls' brought her own lunch.
- D) Each of the girls, brought their own lunch.

Correct Answer: B

Explanation: The pronoun 'each' is singular, so it requires the singular possessive pronoun 'her.' 'Their' is plural.

Question 69. The company's profits began to \_\_\_ after the new CEO implemented his bold strategy.

- A) diminish
- B) augment
- C) deplete
- D) contract

Correct Answer: B

Explanation: A 'bold strategy' is likely intended to increase profits. 'Augment' means to make something greater by adding to it; increase. The other options all suggest a decrease.

Question 70. 'To prepare for the exam, you should review your notes, completing the practice questions, and get a good night's sleep.' How can the parallel structure be corrected?

- A) ...reviewing your notes, completing the practice questions, and getting a good night's sleep.
- B) ...to review your notes, to complete the practice questions, and getting a good night's sleep.
- C) ...review your notes, complete the practice questions, and to get a good night's sleep.
- D) The sentence is already correct.

Correct Answer: A

Explanation: To maintain parallel structure, all items in the list should be in the same grammatical form. Using the '-ing' form (gerund) for all three items ('reviewing,' 'completing,' 'getting') corrects the error. Another correct option would be to use the base verb form for all three: 'review your notes, complete the practice questions, and get a good night's sleep.' Option A is the best choice among the given answers.

## Part II — Mathematics

### Number Sense and Operations

Question 71. What is the value of  $3^4$ ?

- A) 7
- B) 12
- C) 64
- D) 81

Correct Answer: D

Explanation:  $3^4$  means 3 multiplied by itself 4 times:  $3 \times 3 \times 3 \times 3$ .  $3 \times 3 = 9$ ,  $9 \times 3 = 27$ , and  $27 \times 3 = 81$ .

Question 72. Which of the following numbers is a prime number?

- A) 9
- B) 15
- C) 21
- D) 23

Correct Answer: D

Explanation: A prime number is a whole number greater than 1 that has only two factors: 1 and itself. 9 has factors 1, 3, 9. 15 has factors 1, 3, 5, 15. 21 has factors 1, 3, 7, 21. 23 has only factors 1 and 23.

Question 73. What is the greatest common factor (GCF) of 24 and 36?

- A) 6
- B) 8
- C) 12
- D) 72

Correct Answer: C

Explanation: The factors of 24 are 1, 2, 3, 4, 6, 8, 12, 24. The factors of 36 are 1, 2, 3, 4, 6, 9, 12, 18, 36. The greatest factor they have in common is 12.

Question 74. Evaluate the expression:  $5 + (6 \times 2) \div 3 - 1$

- A) 8
- B) 10
- C) 6
- D) 4

Correct Answer: A

Explanation: Following the order of operations (PEMDAS/BODMAS):

1. Parentheses:  $6 \times 2 = 12$
2. Division:  $12 \div 3 = 4$
3. Addition:  $5 + 4 = 9$
4. Subtraction:  $9 - 1 = 8$

Question 75. What is the least common multiple (LCM) of 8 and 10?

- A) 2
- B) 40
- C) 80
- D) 18

Correct Answer: B

Explanation: Multiples of 8 are 8, 16, 24, 32, 40, 48... Multiples of 10 are 10, 20, 30, 40, 50... The least multiple they have in common is 40.

Fractions, Decimals, and Percents

Question 76. Which fraction is equivalent to 0.75?

- A)  $1/4$

- B)  $1/2$
- C)  $3/4$
- D)  $2/3$

Correct Answer: C

Explanation:  $0.75$  can be written as  $75/100$ . This fraction can be simplified by dividing both the numerator and the denominator by their greatest common factor, which is  $25$ .  $75 \div 25 = 3$ , and  $100 \div 25 = 4$ . So, the equivalent fraction is  $3/4$ .

Question 77. What is  $20\%$  of  $150$ ?

- A) 20
- B) 30
- C) 40
- D) 50

Correct Answer: B

Explanation: To find the percentage of a number, convert the percentage to a decimal and multiply.  $20\%$  is  $0.20$ . So,  $0.20 \times 150 = 30$ .

Question 78. Calculate:  $3/5 + 1/2$

- A)  $4/7$
- B)  $11/10$
- C)  $4/10$
- D)  $3/10$

Correct Answer: B

Explanation: To add fractions, you need a common denominator. The least common denominator for 5 and 2 is 10. Convert the fractions:  $3/5 = 6/10$  and  $1/2 = 5/10$ . Now add the numerators:  $6/10 + 5/10 = 11/10$ .

Question 79. A shirt that originally cost \$40 is on sale for  $25\%$  off. What is the sale price?

- A) \$10

B) \$25

C) \$30

D) \$35

Correct Answer: C

Explanation: First, find the discount amount: 25% of \$40 is  $0.25 \times 40 = \$10$ . Then, subtract the discount from the original price:  $\$40 - \$10 = \$30$ .

Question 80. Convert the fraction  $5/8$  to a decimal.

A) 0.58

B) 0.625

C) 0.85

D) 1.6

Correct Answer: B

Explanation: To convert a fraction to a decimal, divide the numerator by the denominator:  $5 \div 8 = 0.625$ .

### Ratios, Rates, and Proportion

Question 81. A recipe calls for 2 cups of flour for every 3 eggs. If you use 9 eggs, how many cups of flour do you need?

A) 4 cups

B) 6 cups

C) 8 cups

D) 13.5 cups

Correct Answer: B

Explanation: Set up a proportion:  $(2 \text{ flour} / 3 \text{ eggs}) = (x \text{ flour} / 9 \text{ eggs})$ . To get from 3 eggs to 9 eggs, you multiply by 3. So, you must also multiply the cups of flour by 3:  $2 \times 3 = 6$  cups of flour.

Question 82. A car travels 180 miles in 3 hours. What is the car's average speed in miles per hour?

- A) 50 mph
- B) 55 mph
- C) 60 mph
- D) 65 mph

Correct Answer: C

Explanation: Rate is distance divided by time.  $180 \text{ miles} \div 3 \text{ hours} = 60 \text{ miles per hour (mph)}$ .

Question 83. The ratio of boys to girls in a class is 4:5. If there are 36 students in total, how many are boys?

- A) 16
- B) 20
- C) 9
- D) 4

Correct Answer: A

Explanation: The ratio 4:5 means there are  $4+5 = 9$  parts in total. To find the value of one part, divide the total number of students by the total number of parts:  $36 \div 9 = 4$  students per part. Since there are 4 parts representing boys, multiply  $4 \times 4 = 16$  boys.

Question 84. If 5 pencils cost \$1.50, how much would 8 pencils cost?

- A) \$2.00
- B) \$2.25
- C) \$2.40
- D) \$2.50

Correct Answer: C

Explanation: First, find the cost of one pencil:  $\$1.50 \div 5 = \$0.30$  per pencil. Then, multiply the cost per pencil by the desired number of pencils:  $\$0.30 \times 8 = \$2.40$ .

Question 85. On a map, 1 inch represents 50 miles. If two cities are 3.5 inches apart on the map, what is the actual distance between them?

- A) 150 miles
- B) 175 miles
- C) 200 miles
- D) 100 miles

Correct Answer: B

Explanation: Set up a proportion or simply multiply the map distance by the scale factor: 3.5 inches  $\times$  50 miles/inch = 175 miles.

#### Algebra Readiness

Question 86. Simplify the expression:  $3x + 2y - x + 5y$

- A)  $2x + 7y$
- B)  $4x + 7y$
- C)  $2x + 3y$
- D)  $4x + 3y$

Correct Answer: A

Explanation: Combine like terms. For the x terms:  $3x - x = 2x$ . For the y terms:  $2y + 5y = 7y$ . The simplified expression is  $2x + 7y$ .

Question 87. If  $x = 4$ , what is the value of the expression  $2x^2 - 5$ ?

- A) 11
- B) 27
- C) 59
- D) 3

Correct Answer: B

Explanation: Substitute 4 for x in the expression. Following the order of operations, calculate the exponent first:  $4^2 = 16$ . Then multiply:  $2 \times 16 = 32$ . Finally, subtract:  $32 - 5 = 27$ .

Question 88. Which expression represents 'five less than twice a number n'?

- A)  $5 - 2n$
- B)  $2n - 5$
- C)  $2(n - 5)$
- D)  $5n - 2$

Correct Answer: B

Explanation: 'Twice a number  $n$ ' is  $2n$ . 'Five less than' that means you subtract 5 from  $2n$ , which is written as  $2n - 5$ .

Question 89. What is the result of  $(4a + 2b) + (3a - b)$ ?

- A)  $7a + b$
- B)  $7a + 3b$
- C)  $a + b$
- D)  $a + 3b$

Correct Answer: A

Explanation: Combine like terms. For the 'a' terms:  $4a + 3a = 7a$ . For the 'b' terms:  $2b - b = b$ . The result is  $7a + b$ .

Question 90. Use the distributive property to simplify:  $4(2x + 3)$

- A)  $8x + 3$
- B)  $6x + 7$
- C)  $8x + 12$
- D)  $2x + 12$

Correct Answer: C

Explanation: The distributive property means you multiply the number outside the parentheses by each term inside the parentheses:  $4 \times 2x = 8x$ , and  $4 \times 3 = 12$ . The result is  $8x + 12$ .

Solving Equations and Inequalities

Question 91. Solve for x:  $3x + 7 = 22$

- A)  $x = 4$
- B)  $x = 5$
- C)  $x = 9.67$
- D)  $x = 15$

Correct Answer: B

Explanation: To solve for x, first subtract 7 from both sides:  $3x = 22 - 7$ , which simplifies to  $3x = 15$ . Then, divide both sides by 3:  $x = 15 \div 3$ , so  $x = 5$ .

Question 92. Solve for y:  $y/4 - 2 = 3$

- A)  $y = 20$
- B)  $y = 4$
- C)  $y = 1$
- D)  $y = 12$

Correct Answer: A

Explanation: First, add 2 to both sides:  $y/4 = 3 + 2$ , which simplifies to  $y/4 = 5$ . Then, multiply both sides by 4:  $y = 5 \times 4$ , so  $y = 20$ .

Question 93. Which of the following values for x makes the inequality  $2x - 1 > 9$  true?

- A) 4
- B) 5
- C) 6
- D) 3

Correct Answer: C

Explanation: First, solve the inequality. Add 1 to both sides:  $2x > 10$ . Divide by 2:  $x > 5$ . The only value given that is greater than 5 is 6.

Question 94. Solve for a:  $5(a - 2) = 25$

- A)  $a = 3$
- B)  $a = 5$
- C)  $a = 7$
- D)  $a = 27$

Correct Answer: C

Explanation: First, divide both sides by 5:  $a - 2 = 5$ . Then, add 2 to both sides:  $a = 5 + 2$ , so  $a = 7$ . Alternatively, distribute the 5 first:  $5a - 10 = 25$ . Add 10 to both sides:  $5a = 35$ . Divide by 5:  $a = 7$ .

Question 95. If  $-4x < 12$ , then which of the following is true?

- A)  $x < -3$
- B)  $x > -3$
- C)  $x < 3$
- D)  $x > 3$

Correct Answer: B

Explanation: To solve for x, you must divide both sides by -4. When you multiply or divide both sides of an inequality by a negative number, you must reverse the inequality sign. So,  $x > 12 / -4$ , which simplifies to  $x > -3$ .

### Translating Word Problems into Algebra

Question 96. Maria has 15 more CDs than her brother, Sam. If C represents the number of CDs Maria has and S represents the number of CDs Sam has, which equation is correct?

- A)  $S = C + 15$
- B)  $C = S + 15$
- C)  $C = 15S$
- D)  $S = 15C$

Correct Answer: B

Explanation: Maria (C) has more CDs. To find her total, you take Sam's number (S) and add 15. Therefore,  $C = S + 15$ .

Question 97. The total cost of a pizza is \$12 plus \$1.50 for each topping. Which equation represents the total cost (C) for a pizza with (t) toppings?

- A)  $C = 12t + 1.50$
- B)  $C = 12 + 1.50t$
- C)  $C = (12 + 1.50)t$
- D)  $t = 12 + 1.50C$

Correct Answer: B

Explanation: The base cost is a flat \$12. The variable cost depends on the number of toppings (t), at \$1.50 each, which is represented as  $1.50t$ . The total cost is the sum of the base cost and the variable cost:  $C = 12 + 1.50t$ .

Question 98. A rectangle's length is 3 inches more than its width. If 'w' represents the width, how would you represent the length?

- A)  $w - 3$
- B)  $3w$
- C)  $w + 3$
- D)  $3 - w$

Correct Answer: C

Explanation: The length is '3 inches more than' the width (w), which translates to adding 3 to w. So, length =  $w + 3$ .

Question 99. John is twice as old as his sister, Emily. The sum of their ages is 24. If E is Emily's age, which equation can be used to find their ages?

- A)  $E + 2E = 24$
- B)  $E + (E + 2) = 24$
- C)  $E + E/2 = 24$

D)  $2E = 24$

Correct Answer: A

Explanation: Let Emily's age be  $E$ . John is twice as old, so his age is  $2E$ . The sum of their ages is 24, so  $E + 2E = 24$ .

Question 100. A taxi service charges a \$5 flat fee plus \$0.50 per mile. If a ride costs \$17.50, which equation could be used to find the number of miles ( $m$ ) traveled?

A)  $5m + 0.50 = 17.50$

B)  $0.50m + 5 = 17.50$

C)  $5.50m = 17.50$

D)  $m + 5 = 17.50$

Correct Answer: B

Explanation: The total cost (\$17.50) is equal to the flat fee (\$5) plus the per-mile charge (\$0.50 times the number of miles,  $m$ ). This translates to the equation  $0.50m + 5 = 17.50$ .

### Patterns, Sequences, and Functions

Question 101. What is the next number in the sequence: 3, 7, 11, 15, \_\_\_?

A) 18

B) 19

C) 20

D) 16

Correct Answer: B

Explanation: This is an arithmetic sequence. The pattern is to add 4 to the previous number.  $15 + 4 = 19$ .

Question 102. What is the next number in the sequence: 1, 4, 9, 16, 25, \_\_\_?

A) 30

B) 35

C) 36

D) 49

Correct Answer: C

Explanation: This sequence consists of perfect squares.  $1^2=1$ ,  $2^2=4$ ,  $3^2=9$ ,  $4^2=16$ ,  $5^2=25$ . The next number is  $6^2$ , which is 36.

Question 103. A function is defined by the rule  $f(x) = 3x - 2$ . What is the value of  $f(5)$ ?

A) 10

B) 13

C) 15

D) 6

Correct Answer: B

Explanation: To find  $f(5)$ , substitute 5 for  $x$  in the function rule:  $f(5) = 3(5) - 2$ . This simplifies to  $15 - 2 = 13$ .

Question 104. Look at the pattern: 81, 27, 9, 3, \_\_\_\_\_. What is the rule for this pattern?

A) Subtract 54

B) Divide by 3

C) Subtract 18

D) Divide by 9

Correct Answer: B

Explanation: Each number in the sequence is the previous number divided by 3.  $81 \div 3 = 27$ ,  $27 \div 3 = 9$ ,  $9 \div 3 = 3$ . The next number would be  $3 \div 3 = 1$ .

Question 105. If a function's input ( $x$ ) and output ( $y$ ) are shown in the table below, what is the function rule?

( $x$ : 2, 3, 4)

( $y$ : 5, 7, 9)

- A)  $y = x + 3$
- B)  $y = 3x - 1$
- C)  $y = 2x + 1$
- D)  $y = x + 4$

Correct Answer: C

Explanation: Test each rule. For  $y = 2x + 1$ :

If  $x=2$ ,  $y = 2(2)+1 = 5$ . (Correct)

If  $x=3$ ,  $y = 2(3)+1 = 7$ . (Correct)

If  $x=4$ ,  $y = 2(4)+1 = 9$ . (Correct)

The rule  $y = 2x + 1$  works for all pairs.

#### Geometry and Measurement

Question 106. What is the perimeter of a rectangle with a length of 10 cm and a width of 5 cm?

- A) 15 cm
- B) 30 cm
- C) 50 cm
- D) 25 cm

Correct Answer: B

Explanation: The formula for the perimeter of a rectangle is  $P = 2l + 2w$ .  $P = 2(10) + 2(5) = 20 + 10 = 30$  cm.

Question 107. What is the area of a triangle with a base of 8 inches and a height of 6 inches?

- A) 14 sq in
- B) 24 sq in
- C) 48 sq in
- D) 28 sq in

Correct Answer: B

Explanation: The formula for the area of a triangle is  $A = (1/2)bh$ .  $A = (1/2) \times 8 \times 6 = 4 \times 6 = 24$  square inches.

Question 108. Two angles in a triangle measure  $40^\circ$  and  $60^\circ$ . What is the measure of the third angle?

- A)  $80^\circ$
- B)  $90^\circ$
- C)  $100^\circ$
- D)  $180^\circ$

Correct Answer: A

Explanation: The sum of the angles in any triangle is always  $180^\circ$ . So,  $180^\circ - (40^\circ + 60^\circ) = 180^\circ - 100^\circ = 80^\circ$ .

Question 109. What is the circumference of a circle with a radius of 5 meters? (Use  $\pi \approx 3.14$ )

- A) 15.7 m
- B) 31.4 m
- C) 78.5 m
- D) 25 m

Correct Answer: B

Explanation: The formula for circumference is  $C = 2\pi r$ .  $C = 2 \times 3.14 \times 5 = 10 \times 3.14 = 31.4$  meters.

Question 110. What is the volume of a rectangular prism with a length of 6 ft, a width of 4 ft, and a height of 3 ft?

- A) 13 cubic ft
- B) 24 cubic ft
- C) 72 cubic ft
- D) 54 cubic ft

Correct Answer: C

Explanation: The formula for the volume of a rectangular prism is  $V = lwh$ .  $V = 6 \times 4 \times 3 = 24 \times 3 = 72$  cubic feet.

### Lines, Angles, and Polygons

Question 111. Two lines that intersect to form right angles are called what?

- A) Parallel lines
- B) Skew lines
- C) Perpendicular lines
- D) Transversal lines

Correct Answer: C

Explanation: Perpendicular lines are defined as two lines that meet or intersect at a 90-degree angle.

Question 112. An angle that measures  $120^\circ$  is classified as what type of angle?

- A) Acute
- B) Right
- C) Obtuse
- D) Straight

Correct Answer: C

Explanation: An obtuse angle is an angle that measures more than  $90^\circ$  but less than  $180^\circ$ .

Question 113. How many sides does a hexagon have?

- A) 5
- B) 6
- C) 7
- D) 8

Correct Answer: B

Explanation: A hexagon is a polygon with six sides and six angles.

Question 114. If two parallel lines are cut by a transversal, the alternate interior angles are what?

- A) Complementary
- B) Supplementary
- C) Congruent
- D) Unequal

Correct Answer: C

Explanation: A key property of parallel lines is that when they are intersected by a transversal, the alternate interior angles are congruent (equal in measure).

Question 115. What is the sum of the interior angles of a pentagon?

- A)  $180^\circ$
- B)  $360^\circ$
- C)  $540^\circ$
- D)  $720^\circ$

Correct Answer: C

Explanation: The formula for the sum of the interior angles of a polygon is  $(n-2) \times 180^\circ$ , where n is the number of sides. For a pentagon, n=5. So,  $(5-2) \times 180^\circ = 3 \times 180^\circ = 540^\circ$ .

### Area, Perimeter, Surface Area, and Volume

Question 116. What is the area of a circle with a diameter of 10 cm? (Use  $\pi \approx 3.14$ )

- A) 31.4 sq cm
- B) 78.5 sq cm
- C) 100 sq cm
- D) 314 sq cm

Correct Answer: B

Explanation: The diameter is 10 cm, so the radius is half of that, which is 5 cm. The formula for the area of a circle is  $A = \pi r^2$ .  $A = 3.14 \times (5)^2 = 3.14 \times 25 = 78.5$  square cm.

Question 117. A square garden has a perimeter of 48 feet. What is the area of the garden?

- A) 12 sq ft
- B) 96 sq ft
- C) 144 sq ft
- D) 24 sq ft

Correct Answer: C

Explanation: A square has four equal sides. To find the length of one side, divide the perimeter by 4:  $48 \text{ ft} \div 4 = 12 \text{ ft}$ . The area of a square is side  $\times$  side, so  $A = 12 \text{ ft} \times 12 \text{ ft} = 144$  square feet.

Question 118. What is the surface area of a cube with a side length of 4 inches?

- A) 16 sq in
- B) 64 sq in
- C) 96 sq in
- D) 48 sq in

Correct Answer: C

Explanation: A cube has 6 identical square faces. The area of one face is side  $\times$  side =  $4 \times 4 = 16$  square inches. The total surface area is the area of one face multiplied by the number of faces:  $16 \times 6 = 96$  square inches.

Question 119. The area of a rectangle is 56 square units. If its width is 7 units, what is its length?

- A) 8 units
- B) 9 units
- C) 49 units
- D) 392 units

Correct Answer: A

Explanation: The formula for the area of a rectangle is  $A = lw$ . We know  $A = 56$  and  $w = 7$ . So,  $56 = 1 \times 7$ . To find the length, divide the area by the width:  $l = 56 \div 7 = 8$  units.

Question 120. A cylinder has a radius of 3 cm and a height of 10 cm. What is its volume? (Use  $\pi \approx 3.14$ )

- A) 94.2 cubic cm
- B) 188.4 cubic cm
- C) 282.6 cubic cm
- D) 30 cubic cm

Correct Answer: C

Explanation: The formula for the volume of a cylinder is  $V = \pi r^2 h$ .  $V = 3.14 \times (3)^2 \times 10 = 3.14 \times 9 \times 10 = 28.26 \times 10 = 282.6$  cubic cm.

### Coordinate Geometry

Question 121. In the coordinate plane, what are the coordinates of the origin?

- A) (1, 1)
- B) (0, 0)
- C) (1, 0)
- D) (0, 1)

Correct Answer: B

Explanation: The origin is the point where the x-axis and the y-axis intersect, which is at the coordinates (0, 0).

Question 122. A point is located at (-3, 5). In which quadrant does this point lie?

- A) Quadrant I
- B) Quadrant II
- C) Quadrant III

D) Quadrant IV

Correct Answer: B

Explanation: Quadrant II is defined by negative x-values and positive y-values.

Question 123. What is the distance between the points (2, 3) and (2, 8)?

A) 3

B) 4

C) 5

D) 11

Correct Answer: C

Explanation: Since the x-coordinates are the same, the distance is the absolute difference between the y-coordinates:  $|8 - 3| = 5$ .

Question 124. A line segment has endpoints at (-2, 1) and (4, 1). What is the length of the segment?

A) 2

B) 4

C) 6

D) 0

Correct Answer: C

Explanation: Since the y-coordinates are the same, the distance is the absolute difference between the x-coordinates:  $|4 - (-2)| = |4 + 2| = 6$ .

Question 125. If you reflect the point (3, -4) across the x-axis, what are the coordinates of the new point?

A) (-3, -4)

B) (-3, 4)

C) (3, 4)

D) (4, -3)

Correct Answer: C

Explanation: Reflecting a point across the x-axis keeps the x-coordinate the same and changes the sign of the y-coordinate. So,  $(3, -4)$  becomes  $(3, 4)$ .

### Data, Statistics, and Probability

Question 126. The graph shows that 50% of students prefer pizza, 25% prefer burgers, and 25% prefer tacos. What type of graph is most suitable for displaying this data?

- A) Line graph
- B) Scatter plot
- C) Circle graph (pie chart)
- D) Bar graph

Correct Answer: C

Explanation: A circle graph, or pie chart, is ideal for showing parts of a whole, which is what percentages represent.

Question 127. A bar chart shows the number of books read by five students: Alice (8), Bob (6), Carol (10), David (6), and Eve (5). Who read the most books?

- A) Alice
- B) Bob
- C) Carol
- D) David

Correct Answer: C

Explanation: By reading the heights of the bars on the chart, Carol's bar would be the highest, corresponding to the value of 10.

Question 128. A line graph is best used for what purpose?

- A) Comparing categories of data
- B) Showing the relationship between two variables
- C) Displaying data as parts of a whole

D) Tracking changes over a period of time

Correct Answer: D

Explanation: Line graphs are excellent for showing trends or how data changes over time, such as temperature changes throughout a day or a company's profit over several years.

Question 129. A table lists the high temperature for each day of a week. What is the range of the temperatures if the values are 65, 68, 72, 71, 66, 73, 70?

- A) 8
- B) 7
- C) 69
- D) 73

Correct Answer: A

Explanation: The range is the difference between the highest and lowest values in a data set. The highest temperature is 73 and the lowest is 65. The range is  $73 - 65 = 8$ .

Question 130. According to a survey shown in a table, 40 out of 100 people own a dog, and 30 out of 100 people own a cat. How many more people own a dog than a cat?

- A) 70
- B) 10
- C) 30
- D) 40

Correct Answer: B

Explanation: This is a simple subtraction problem based on data from the table: 40 (dog owners) - 30 (cat owners) = 10.

### Mean, Median, Mode, and Range

Question 131. What is the mean (average) of the following set of numbers: 4, 8, 9, 5, 4?

- A) 4

- B) 5
- C) 6
- D) 30

Correct Answer: C

Explanation: To find the mean, add all the numbers together and divide by the count of the numbers.  $\text{Sum} = 4 + 8 + 9 + 5 + 4 = 30$ .  $\text{Count} = 5$ .  $\text{Mean} = 30 \div 5 = 6$ .

Question 132. What is the median of the following data set: 9, 2, 7, 5, 10?

- A) 7
- B) 9
- C) 5
- D) 6.6

Correct Answer: A

Explanation: To find the median, first put the numbers in order: 2, 5, 7, 9, 10. The median is the middle number. In this set, the middle number is 7.

Question 133. What is the mode of the following data set: 6, 8, 9, 8, 10, 7, 8, 6?

- A) 6
- B) 7
- C) 8
- D) 9

Correct Answer: C

Explanation: The mode is the number that appears most frequently in a data set. The number 8 appears three times, which is more than any other number.

Question 134. Find the median of the data set: 12, 18, 14, 22, 16, 20.

- A) 14
- B) 16

C) 17

D) 18

Correct Answer: C

Explanation: First, order the numbers: 12, 14, 16, 18, 20, 22. Since there is an even number of values, the median is the average of the two middle numbers (16 and 18).  $(16 + 18) \div 2 = 34 \div 2 = 17$ .

Question 135. A student has test scores of 85, 90, and 82. What score does the student need on the fourth test to have a mean score of 85?

A) 80

B) 83

C) 85

D) 88

Correct Answer: B

Explanation: To have a mean of 85 on four tests, the total score must be  $85 \times 4 = 340$ . The sum of the first three scores is  $85 + 90 + 82 = 257$ . The score needed on the fourth test is  $340 - 257 = 83$ .

### Simple Probability Concepts

Question 136. A standard six-sided die is rolled. What is the probability of rolling a 4?

A) 1/6

B) 1/3

C) 1/2

D) 4/6

Correct Answer: A

Explanation: There is one favorable outcome (rolling a 4) out of six possible outcomes (1, 2, 3, 4, 5, 6). So the probability is 1/6.

Question 137. A bag contains 3 red marbles, 5 blue marbles, and 2 green marbles. What is the probability of drawing a blue marble?

- A) 1/5
- B) 1/2
- C) 3/10
- D) 5/8

Correct Answer: B

Explanation: There are 5 blue marbles (favorable outcomes) and a total of  $3 + 5 + 2 = 10$  marbles (total possible outcomes). The probability is  $5/10$ , which simplifies to  $1/2$ .

Question 138. A coin is flipped. What is the probability of it landing on heads?

- A) 0
- B) 1/2
- C) 1
- D) 1/4

Correct Answer: B

Explanation: There are two possible outcomes (heads or tails), and one of them is favorable (heads). The probability is  $1/2$ .

Question 139. From a standard deck of 52 cards, what is the probability of drawing a King?

- A) 1/52
- B) 1/26
- C) 1/13
- D) 1/4

Correct Answer: C

Explanation: There are 4 Kings in a 52-card deck. The probability is  $4/52$ , which simplifies to  $1/13$ .

Question 140. If an event is certain to happen, what is its probability?

- A) 0
- B) 0.5

C) 1

D) 100

Correct Answer: C

Explanation: Probability is measured on a scale from 0 to 1. A probability of 0 means the event is impossible, and a probability of 1 means the event is certain.

Practice Review: Mathematics

Question 141. Solve for  $x$ :  $2(x + 3) = 14$

A)  $x = 4$

B)  $x = 5$

C)  $x = 8$

D)  $x = 11$

Correct Answer: A

Explanation: Divide both sides by 2:  $x + 3 = 7$ . Subtract 3 from both sides:  $x = 4$ .

Question 142. A pizza is cut into 8 equal slices. If you eat 3 slices, what percentage of the pizza did you eat?

A) 30%

B) 37.5%

C) 40%

D)  $3/8\%$

Correct Answer: B

Explanation: You ate  $3/8$  of the pizza. To convert this fraction to a percentage, first convert it to a decimal:  $3 \div 8 = 0.375$ . Then, multiply by 100 to get the percentage:  $0.375 \times 100 = 37.5\%$ .

Question 143. What is the median of the data set: 23, 15, 19, 25, 15, 28?

A) 15

B) 19

C) 21

D) 23

Correct Answer: C

Explanation: First, order the numbers: 15, 15, 19, 23, 25, 28. The two middle numbers are 19 and 23. The median is their average:  $(19 + 23) \div 2 = 42 \div 2 = 21$ .

Question 144. The ratio of apples to oranges in a basket is 3:2. If there are 12 apples, how many oranges are there?

A) 6

B) 8

C) 18

D) 20

Correct Answer: B

Explanation: Set up a proportion:  $(3 \text{ apples} / 2 \text{ oranges}) = (12 \text{ apples} / x \text{ oranges})$ . To get from 3 apples to 12 apples, you multiply by 4. So, you must multiply the number of oranges by 4 as well:  $2 \times 4 = 8$  oranges.

Question 145. What is the area of a parallelogram with a base of 12 cm and a height of 5 cm?

A) 17 sq cm

B) 30 sq cm

C) 34 sq cm

D) 60 sq cm

Correct Answer: D

Explanation: The formula for the area of a parallelogram is  $A = \text{base} \times \text{height}$ .  $A = 12 \text{ cm} \times 5 \text{ cm} = 60 \text{ square cm}$ .

## Verbal Reasoning

Question 146. Which word does not belong with the others?

- A) Chair
- B) Table
- C) Sofa
- D) Rug

Correct Answer: D

Explanation: Chair, Table, and Sofa are all types of furniture that you sit at or on. A rug is a floor covering, which is a different category.

Question 147. Pen is to Write as Shovel is to \_\_\_\_.

- A) Garden
- B) Dirt
- C) Dig
- D) Handle

Correct Answer: C

Explanation: This is a tool-to-function analogy. A pen is a tool used to write. A shovel is a tool used to dig.

Question 148. Choose the word that is most nearly the opposite of 'brave.'

- A) Strong
- B) Heroic
- C) Cowardly
- D) Bold

Correct Answer: C

Explanation: Brave means ready to face and endure danger or pain. Cowardly means lacking courage.

Question 149. Which word best completes the sentence: A library is a place for books, and a(n) \_\_\_\_\_ is a place for art.

- A) Museum
- B) School
- C) Theater
- D) Stadium

Correct Answer: A

Explanation: This analogy relates a place to the primary item or concept it houses. A library houses books, and a museum houses art.

Question 150. Find the two words, one from each group, that are closest in meaning.

(Group 1: Happy, Fast, Angry)

(Group 2: Slow, Joyful, Sad)

- A) Happy and Slow
- B) Fast and Sad
- C) Happy and Joyful
- D) Angry and Slow

Correct Answer: C

Explanation: Happy and Joyful are synonyms, both describing a state of pleasure and contentment.

### Analogy and Word Relationships

Question 151. Doctor is to Hospital as Teacher is to \_\_\_\_.

- A) Student
- B) Book
- C) School
- D) Desk

Correct Answer: C

Explanation: This is a worker-to-workplace analogy. A doctor works in a hospital, and a teacher works in a school.

Question 152. Leaf is to Tree as Petal is to \_\_\_\_.

- A) Flower
- B) Stem
- C) Garden
- D) Color

Correct Answer: A

Explanation: This is a part-to-whole analogy. A leaf is part of a tree, and a petal is part of a flower.

Question 153. Hot is to Cold as Wet is to \_\_\_\_.

- A) Water
- B) Rain
- C) Dry
- D) Damp

Correct Answer: C

Explanation: This is an antonym analogy. Hot is the opposite of cold, and wet is the opposite of dry.

Question 154. Car is to Road as Train is to \_\_\_\_.

- A) Station
- B) Engine
- C) Track
- D) Conductor

Correct Answer: C

Explanation: This analogy relates a vehicle to the surface or path it travels on. A car travels on a road, and a train travels on a track.

Question 155. Hungry is to Eat as Tired is to \_\_\_\_.

- A) Work
- B) Sleep
- C) Yawn
- D) Bed

Correct Answer: B

Explanation: This analogy relates a state or feeling to the action that resolves it. When you are hungry, you eat. When you are tired, you sleep.

#### Synonyms, Antonyms, and Classifications

Question 156. Which word is a synonym for 'enormous'?

- A) Tiny
- B) Average
- C) Huge
- D) Quiet

Correct Answer: C

Explanation: Enormous and huge both mean very large in size.

Question 157. Which word is an antonym for 'ancient'?

- A) Old
- B) Modern
- C) Historical
- D) Past

Correct Answer: B

Explanation: Ancient refers to the very distant past. Modern refers to the present or recent times.

Question 158. Which item does not belong in the group?

- A) Apple
- B) Banana
- C) Carrot
- D) Orange

Correct Answer: C

Explanation: Apple, Banana, and Orange are all fruits. A carrot is a vegetable.

Question 159. 'Generous' is most nearly the opposite of \_\_\_\_.

- A) Kind
- B) Giving
- C) Selfish
- D) Happy

Correct Answer: C

Explanation: Generous means showing a readiness to give more of something than is necessary or expected. Selfish means lacking consideration for others and being concerned chiefly with one's own personal profit or pleasure.

Question 160. Which word belongs in the same category as 'Triangle' and 'Square'?

- A) Circle
- B) Sphere
- C) Cube
- D) Line

Correct Answer: A

Explanation: Triangle and Square are both two-dimensional geometric shapes (polygons). A circle is also a two-dimensional shape. Sphere and Cube are three-dimensional, and a line is one-dimensional.

## Quantitative Reasoning

Question 161. Look at this series: 2, 6, 18, 54, ... What number should come next?

- A) 108
- B) 162
- C) 152
- D) 216

Correct Answer: B

Explanation: This is a geometric series where each number is multiplied by 3 to get the next number.  $54 \times 3 = 162$ .

Question 162. Look at this series: 3, 4, 6, 9, 13, ... What number should come next?

- A) 15
- B) 16
- C) 17
- D) 18

Correct Answer: D

Explanation: The pattern is to add a consecutively increasing number. First, 1 is added ( $3+1=4$ ), then 2 is added ( $4+2=6$ ), then 3 is added ( $6+3=9$ ), then 4 is added ( $9+4=13$ ). The next step is to add 5:  $13 + 5 = 18$ .

Question 163. Which number is greater:  $3/4$  or  $0.8$ ?

- A)  $3/4$
- B)  $0.8$
- C) They are equal
- D) Cannot be determined

Correct Answer: B

Explanation: To compare, convert the fraction to a decimal.  $3/4$  is equal to 0.75. Since 0.8 is greater than 0.75, 0.8 is the greater number.

Question 164. If  $a > b$  and  $b > c$ , which of the following must be true?

- A)  $a = c$
- B)  $a < c$
- C)  $a > c$
- D)  $a = b$

Correct Answer: C

Explanation: This demonstrates the transitive property of inequality. If 'a' is greater than 'b', and 'b' is greater than 'c', then 'a' must also be greater than 'c'.

Question 165. A store sells apples for \$0.50 each and oranges for \$0.60 each. Which costs more: 5 apples or 4 oranges?

- A) 5 apples
- B) 4 oranges
- C) They cost the same
- D) Cannot be determined

Correct Answer: A

Explanation: Cost of 5 apples =  $5 \times \$0.50 = \$2.50$ . Cost of 4 oranges =  $4 \times \$0.60 = \$2.40$ . Therefore, 5 apples cost more.

### Number Series and Pattern Recognition

Question 166. Look at this series: 4, 5, 7, 10, 14, 19, ... What number should come next?

- A) 24
- B) 25
- C) 23
- D) 22

Correct Answer: B

Explanation: The difference between consecutive numbers increases by 1 each time: +1, +2, +3, +4, +5. The next step is to add 6.  $19 + 6 = 25$ .

Question 167. Look at this series: 5, 10, 8, 16, 14, 28, ... What number should come next?

- A) 26
- B) 30
- C) 56
- D) 14

Correct Answer: A

Explanation: The pattern is to multiply by 2, then subtract 2, and repeat.  $5 \times 2 = 10$ ,  $10 - 2 = 8$ ,  $8 \times 2 = 16$ ,  $16 - 2 = 14$ ,  $14 \times 2 = 28$ . The next step is to subtract 2:  $28 - 2 = 26$ .

Question 168. Look at this series: F2, \_\_, D8, C16, B32, ... What term is missing?

- A) E4
- B) E3
- C) F4
- D) G4

Correct Answer: A

Explanation: The pattern consists of two parts. The letters are going backward through the alphabet (F, E, D, C, B). The numbers are being multiplied by 2 (2, 4, 8, 16, 32). The missing term is E4.

Question 169. Look at this series: 1, 1, 2, 3, 5, 8, 13, ... What number should come next?

- A) 18
- B) 20
- C) 21
- D) 24

Correct Answer: C

Explanation: This is the Fibonacci sequence, where each number is the sum of the two preceding ones.  $1+1=2$ ,  $1+2=3$ ,  $2+3=5$ ,  $3+5=8$ ,  $5+8=13$ . The next number is  $8 + 13 = 21$ .

Question 170. Look at this series: 9, 12, 11, 14, 13, 16, 15, ... What number should come next?

- A) 14
- B) 17
- C) 18
- D) 19

Correct Answer: C

Explanation: The pattern is to add 3, then subtract 1, and repeat.  $9+3=12$ ,  $12-1=11$ ,  $11+3=14$ ,  $14-1=13$ ,  $13+3=16$ ,  $16-1=15$ . The next step is to add 3:  $15 + 3 = 18$ .

#### Quantitative Comparisons and Estimations

Question 171. Compare Quantity A and Quantity B.

Quantity A: 50% of 80

Quantity B: 25% of 160

- A) Quantity A is greater.
- B) Quantity B is greater.
- C) The two quantities are equal.
- D) The relationship cannot be determined.

Correct Answer: C

Explanation: Quantity A: 50% of 80 is  $0.50 \times 80 = 40$ . Quantity B: 25% of 160 is  $0.25 \times 160 = 40$ . The two quantities are equal.

Question 172. Estimate the product of 29 and 41.

- A) 800
- B) 1000
- C) 1200

D) 1500

Correct Answer: C

Explanation: To estimate, round the numbers to the nearest ten. 29 rounds to 30, and 41 rounds to 40. The estimated product is  $30 \times 40 = 1200$ .

Question 173. Compare Quantity A and Quantity B, given that  $x > 0$ .

Quantity A:  $x + 5$

Quantity B:  $5x$

A) Quantity A is greater.

B) Quantity B is greater.

C) The two quantities are equal.

D) The relationship cannot be determined from the information given.

Correct Answer: D

Explanation: The relationship depends on the value of  $x$ . If  $x = 1$ , A=6 and B=5 (A is greater). If  $x = 2$ , A=7 and B=10 (B is greater). Since the relationship changes depending on the value of  $x$ , it cannot be determined.

Question 174. Which is the best estimate for the cost of 8 items that cost \$3.99 each?

A) \$24

B) \$28

C) \$32

D) \$36

Correct Answer: C

Explanation: Round \$3.99 up to \$4.00 for easier calculation. The estimated cost is  $8 \times \$4.00 = \$32.00$ .

Question 175. Compare Quantity A and Quantity B.

Quantity A: The area of a square with a side of 5.

Quantity B: The perimeter of a square with a side of 5.

- A) Quantity A is greater.
- B) Quantity B is greater.
- C) The two quantities are equal.
- D) The relationship cannot be determined.

Correct Answer: A

Explanation: Quantity A: Area =  $\text{side}^2 = 5^2 = 25$ . Quantity B: Perimeter =  $4 \times \text{side} = 4 \times 5 = 20$ .

Quantity A is greater than Quantity B.

### Abstract/Nonverbal Reasoning

Question 176. A sequence of figures shows a square rotating 45 degrees clockwise at each step. If the first figure has a corner pointing up, what will the third figure look like?

- A) A square with a corner pointing down.
- B) A square with a flat side on top (a diamond shape).
- C) A square with a corner pointing to the right.
- D) A square with a corner pointing up.

Correct Answer: C

Explanation: Step 1: Corner up. Step 2: Rotates 45 degrees clockwise, so the corner points to the upper-right. Step 3: Rotates another 45 degrees clockwise, so the corner points directly to the right.

Question 177. A 3x3 grid has a circle in the top-left, a triangle in the middle, and a square in the bottom-right. The pattern is that each row must contain one of each shape. If the top row has a circle, square, triangle and the middle row has a triangle, circle, square, what is the order in the bottom row?

- A) Circle, Triangle, Square
- B) Square, Triangle, Circle
- C) Triangle, Square, Circle
- D) Square, Circle, Triangle

Correct Answer: B

Explanation: This is a logic puzzle similar to Sudoku. The bottom row needs one of each shape. The first column already has a circle and a triangle, so the bottom-left must be a square. The second column has a square and a circle, so the bottom-middle must be a triangle. The third column has a triangle and a square, so the bottom-right must be a circle. The order is Square, Triangle, Circle.

Question 178. A figure matrix shows a pattern. The first box has one dot. The second box has two dots. The third box has three dots. What does the fourth box have?

- A) Two dots
- B) Three dots
- C) Four dots
- D) Five dots

Correct Answer: C

Explanation: The pattern is a simple progression of adding one dot at each step. The fourth box will have four dots.

Question 179. A figure is folded along a dotted line. If the figure is a square with a small circle in the top-left corner and the fold is vertical down the middle, where will the circle appear on the folded paper?

- A) It will be on the top layer, in the top-left corner.
- B) It will be hidden inside the fold.
- C) It will be on the top layer, in the top-right corner.
- D) It will be on the bottom layer.

Correct Answer: A

Explanation: When the square is folded vertically, the left half folds over the right half. The circle, being in the top-left corner of the left half, will remain visible on the top layer in the same relative position.

Question 180. A sequence of shapes is Circle, Square, Triangle, Circle, Square, \_\_\_\_\_. What shape comes next?

- A) Circle

- B) Square
- C) Triangle
- D) Pentagon

Correct Answer: C

Explanation: The pattern is a repeating sequence of three shapes: Circle, Square, Triangle. The sequence repeats after the triangle.

Practice Review: Ability

Question 181. Pilot is to Airplane as Captain is to \_\_\_\_.

- A) Team
- B) Ship
- C) Car
- D) Office

Correct Answer: B

Explanation: This is a leader-to-vehicle/vessel analogy. A pilot is in command of an airplane, and a captain is in command of a ship.

Question 182. Look at this series: 1, 2, 4, 8, 16, ... What number should come next?

- A) 20
- B) 24
- C) 32
- D) 48

Correct Answer: C

Explanation: This is a geometric series where each number is multiplied by 2.  $16 \times 2 = 32$ .

Question 183. Which word does not belong with the others?

- A) Run
- B) Walk

C) Swim

D) Think

Correct Answer: D

Explanation: Run, Walk, and Swim are all forms of physical movement. Think is a mental process.

Question 184. Compare Quantity A and Quantity B.

Quantity A: The number of sides in a hexagon.

Quantity B: The number of sides in a pentagon.

A) Quantity A is greater.

B) Quantity B is greater.

C) The two quantities are equal.

D) The relationship cannot be determined.

Correct Answer: A

Explanation: A hexagon has 6 sides, and a pentagon has 5 sides. Therefore, Quantity A is greater.

Question 185. A sequence of figures shows a shaded square moving one position to the right in a 1x4 grid. If it starts in the first position, where will it be in the fourth figure?

A) First position

B) Second position

C) Third position

D) Fourth position

Correct Answer: D

Explanation: Figure 1 is in position 1. Figure 2 is in position 2. Figure 3 is in position 3. Figure 4 will be in position 4.

## Part IV — Strategies and Test Readiness

### Effective Pacing and Time Management

Question 186. On a test section with 30 questions and a 30-minute time limit, what is the average amount of time you should spend per question?

- A) 30 seconds
- B) 1 minute
- C) 2 minutes
- D) 3 minutes

Correct Answer: B

Explanation: With 30 questions in 30 minutes, the average time per question is  $30 \text{ minutes} / 30 \text{ questions} = 1 \text{ minute per question}$ . This helps in setting a baseline pace.

Question 187. If you encounter a very difficult question that is taking a lot of time, what is the best strategy?

- A) Spend as much time as needed to solve it before moving on.
- B) Guess randomly and move on immediately.
- C) Make an educated guess, mark the question for review, and move on.
- D) Leave the question blank and come back to it only after finishing all others.

Correct Answer: C

Explanation: The best strategy is to not get bogged down. Eliminate obviously wrong answers, make your best guess from the remaining options, mark it, and return to it later if time permits. This ensures you have a chance to answer all the questions you know.

Question 188. What is a good practice for managing your time during a standardized test?

- A) Spend the first half of the time on the first half of the questions, regardless of difficulty.
- B) Periodically check the clock against your progress (e.g., check that you are about halfway through the questions when half the time is up).
- C) Ignore the clock completely to avoid anxiety.

D) Rush through the easy questions to save all the time for the hard ones.

Correct Answer: B

Explanation: Periodically checking your progress against the clock helps you adjust your pace. It prevents you from spending too much time on one section or question and ensures you are on track to finish.

### Smart Guessing and Elimination Techniques

Question 189. When you are unsure of an answer on a multiple-choice question, what should be your first step?

- A) Choose option C, as it is most often correct.
- B) Try to eliminate answer choices that you know are incorrect.
- C) Guess the first option that seems plausible.
- D) Reread the question five times.

Correct Answer: B

Explanation: The process of elimination increases your probability of guessing the correct answer. If you can eliminate even one or two wrong choices, your odds improve significantly.

Question 190. On a multiple-choice math question, you notice that two of the answer choices are very close together (e.g., 15.2 and 15.3) while the others are far apart (e.g., 5 and 100). This might suggest what?

- A) The correct answer is definitely one of the far-apart options.
- B) The question is flawed and should be skipped.
- C) The correct answer is likely one of the two close options, designed to catch small calculation errors.
- D) The test makers are trying to trick you by making the answer obvious.

Correct Answer: C

Explanation: Test makers often include answer choices that result from common mistakes. When two answers are very close, it's a good indicator that precision is required and one of them is likely correct, while the other is the result of a slight error.

Question 191. If a question includes absolute words like 'always,' 'never,' or 'all,' what should you do?

- A) Assume the statement is true.
- B) Treat these choices with suspicion, as they are often incorrect.
- C) Assume these choices are the most likely to be correct.
- D) Ignore the absolute words as they are not important.

Correct Answer: B

Explanation: Statements with absolute words are rarely true because it only takes one exception to make them false. These are often distractors, so you should examine them critically.

#### Recognizing Common Trap Choices

Question 192. In a reading comprehension question, an answer choice that is true according to the passage but does not answer the specific question being asked is an example of what?

- A) A correct answer.
- B) An irrelevant detail trap.
- C) An opposite answer.
- D) A word-for-word match trap.

Correct Answer: B

Explanation: A common trap is to provide an answer choice that contains factual information from the passage but doesn't actually address what the question is asking. It's designed to catch test-takers who recognize the information but don't analyze the question carefully.

Question 193. In a math problem, one of the answer choices matches the result of an intermediate step in the calculation, but not the final answer. This is a trap designed to catch students who do what?

- A) Work too quickly and don't finish the problem.
- B) Check their work carefully.
- C) Are good at mental math.
- D) Don't know the formula.

Correct Answer: A

Explanation: Test makers know the common steps to solve a problem and will often include the result of a partial calculation as an answer choice to trap students who stop working before they have reached the final solution.

Question 194. An answer choice that is the exact opposite of the correct answer (e.g., 'increase' instead of 'decrease') is a common trap that tests what?

- A) Your vocabulary.
- B) Your ability to read carefully.
- C) Your math skills.
- D) Your guessing strategy.

Correct Answer: B

Explanation: This type of trap is designed to catch students who misread the question or a key word in the passage. It directly tests your attention to detail.

#### Section-by-Section Strategy Tips

Question 195. For the Reading Comprehension section, what is a recommended strategy?

- A) Read the questions first before reading the passage to know what to look for.
- B) Read the passage very slowly and carefully, memorizing every detail.
- C) Read only the first and last sentences of each paragraph.
- D) Read the answer choices before reading the passage or the questions.

Correct Answer: A

Explanation: Reading the questions first (without looking at the answer choices) can help you focus your reading of the passage. You will know what specific information you need to find, which can make your reading more efficient.

Question 196. In the Mathematics section, if you have solved a problem, what is a good final step before marking your answer?

- A) Move on immediately to save time.

B) Reread the question to ensure you answered what was being asked.

C) Redo the entire problem from scratch.

D) Choose the answer that looks most reasonable.

Correct Answer: B

Explanation: It's easy to make a mistake like solving for 'x' when the question asked for '2x'. A quick reread of the question ensures your final answer matches what was actually asked, preventing simple mistakes.

Question 197. For the Ability section, especially with pattern recognition, what should you do if you don't see the pattern immediately?

A) Stare at it until the pattern becomes clear.

B) Skip the question permanently.

C) Look for simple relationships first (addition, subtraction, rotation, etc.) before looking for complex ones.

D) Guess and move on without thinking.

Correct Answer: C

Explanation: Patterns are often based on simple rules. Systematically check for the most common types of patterns first. Don't assume it has to be complex. This methodical approach can reveal the pattern more quickly than random observation.

### **Mental Preparation and Test Confidence**

Question 198. Which of the following is the best mindset to have while taking a high-stakes test?

A) 'I must get every single question right.'

B) 'This test will determine my entire future.'

C) 'I will do my best on each question, one at a time, and not worry about the ones I don't know.'

D) 'If I don't know an answer in 10 seconds, I should panic.'

Correct Answer: C

Explanation: A calm, focused, and positive mindset is crucial. Focusing on doing your best on the current question without being overwhelmed by the big picture or past mistakes helps maintain concentration and reduces anxiety.

Question 199. What is the most effective way to build confidence before a test?

- A) Don't study at all and trust your natural ability.
- B) Cram all night the night before the test.
- C) Consistent practice and review over a period of time.
- D) Only focus on your weakest subjects and ignore your strengths.

Correct Answer: C

Explanation: Confidence comes from preparation. Knowing that you have put in the time and effort through consistent practice is the most reliable way to feel prepared and confident on test day.

Question 200. On the day of the test, what is the best way to manage stress and focus?

- A) Drink a lot of caffeine to stay alert.
- B) Arrive at the test center just as the test is about to begin.
- C) Take a few deep breaths to calm yourself before the test begins and during breaks.
- D) Talk to other nervous students about how difficult the test will be.

Correct Answer: C

Explanation: Simple relaxation techniques like deep breathing can lower your heart rate and reduce anxiety, helping you to think more clearly. Arriving early, avoiding excessive caffeine, and staying away from negative conversations are also key components of good test-day management.

## **Reading Comprehension Foundations**

Question 201. Distinguishing between fact and opinion is a key reading skill. Which of the following statements is a fact?

- A) Summer is the best season of the year.
- B) The Earth revolves around the Sun.
- C) Chocolate ice cream is more delicious than vanilla.
- D) Reading books is the most relaxing hobby.

Correct Answer: B

Explanation: A fact is a statement that can be proven true or false. The Earth's revolution around the Sun is a scientifically proven fact. The other statements are opinions because they are based on personal beliefs or preferences and cannot be universally proven.

Question 202. When a reader makes an educated guess about what will happen next in a story, they are doing what?

- A) Summarizing
- B) Stating the main idea
- C) Making a prediction
- D) Identifying the author's purpose

Correct Answer: C

Explanation: Making a prediction, or predicting, involves using clues from the text and your own knowledge to make a logical guess about future events in the narrative.

Question 203. A summary of a passage should include what?

- A) Every detail mentioned in the passage.
- B) The reader's personal opinion about the topic.
- C) The main ideas and most important supporting points.
- D) Only the information from the first paragraph.

Correct Answer: C

Explanation: A good summary is a concise overview of a text's most important information. It should accurately reflect the main ideas and the key details that support them, leaving out minor details and personal opinions.

Question 204. The author's perspective is best described as what?

- A) The genre of the story.
- B) The number of pages in the book.
- C) The author's unique combination of ideas, values, and beliefs that influences the text.

D) The main character's name.

Correct Answer: C

Explanation: An author's perspective is the lens through which they see a topic. It is shaped by their background, experiences, and beliefs, and it influences how they present information and characters.

Question 205. What does it mean to "read between the lines"?

A) To read the text aloud.

B) To understand ideas that are not stated directly.

C) To skip every other line of text.

D) To look for spelling errors.

Correct Answer: B

Explanation: Reading between the lines means to infer. It is the process of using context clues and evidence in the text to understand implicit messages, character motivations, or underlying themes that the author has not explicitly stated.

### **Main Idea, Purpose, and Supporting Details**

Question 206. A political speech that urges citizens to vote for a specific candidate is primarily intended to do what?

A) Inform

B) Persuade

C) Entertain

D) Describe

Correct Answer: B

Explanation: The primary purpose of such a speech is to persuade, or convince, the audience to take a specific action—in this case, to vote for the candidate.

Question 207. A paragraph describes a lion's diet, habitat, and social structure. Which of the following would be the best title (main idea) for this paragraph?

- A) The Dangers of the Savanna
- B) Why Lions Are the Best Animals
- C) The Life and Behavior of Lions
- D) A Trip to the Zoo

Correct Answer: C

Explanation: The details provided (diet, habitat, social structure) all fall under the general topic of the life and behavior of lions. This title accurately captures the main idea of the paragraph.

Question 208. If the main idea of an essay is 'The internet has transformed communication,' which of the following is the most relevant supporting detail?

- A) The first computer was invented in the 20th century.
- B) Social media platforms allow for instant connection with people worldwide.
- C) Many people enjoy watching movies online.
- D) The internet can be a source of distraction.

Correct Answer: B

Explanation: This detail directly supports the main idea by providing a specific example of how the internet has changed communication, allowing for immediate global interaction.

Question 209. A fictional short story about a talking dog who goes on an adventure is written for what primary purpose?

- A) To inform the reader about canine biology.
- B) To persuade the reader to adopt a dog.
- C) To provide a factual account of an event.
- D) To entertain the reader with an imaginative tale.

Correct Answer: D

Explanation: Fictional stories, especially those with fantastical elements like a talking dog, are created primarily for the purpose of entertainment.

Question 210. An instruction manual for a new smartphone serves what purpose?

- A) To persuade you to buy the phone.
- B) To entertain you with stories about phones.
- C) To inform you about how to use the phone's features.
- D) To argue that this phone is better than others.

Correct Answer: C

Explanation: The purpose of an instruction manual is to inform or explain. It provides factual, step-by-step guidance on how to operate a device.

### **Inference and Author's Tone**

Question 211. A character in a story avoids eye contact, speaks in a shaky voice, and constantly fidgets. What can you infer about how the character is feeling?

- A) Confident and bold
- B) Calm and relaxed
- C) Angry and defiant
- D) Nervous and anxious

Correct Answer: D

Explanation: These body language cues—avoiding eye contact, a shaky voice, and fidgeting—are classic indicators of nervousness or anxiety.

Question 212. An author describes a city as 'a concrete jungle where ambition thrived and kindness withered.' The author's tone is best described as what?

- A) Joyful
- B) Humorous
- C) Critical
- D) Neutral

Correct Answer: C

Explanation: The author uses negative imagery ('concrete jungle,' 'kindness withered') to express a disapproving or critical view of the city's effect on people.

Question 213. After a team loses a game, the coach says, 'Don't worry, we'll get them next time. Every practice is a step forward.' The coach's tone is what?

- A) Sarcastic and mocking
- B) Discouraged and defeated
- C) Encouraging and optimistic
- D) Angry and disappointed

Correct Answer: C

Explanation: The coach's words are meant to lift the team's spirits and focus on future improvement, reflecting an encouraging and optimistic tone.

Question 214. A passage describes a historical event with precise dates, names, and objective language, without expressing any personal feelings. The author's tone is what?

- A) Formal and objective
- B) Casual and informal
- C) Passionate and biased
- D) Sad and nostalgic

Correct Answer: A

Explanation: The use of factual details and the absence of emotional or biased language indicate a formal and objective tone, typical of encyclopedias or textbooks.

Question 215. A character walks into their messy room and exclaims, 'Wow, this place is sparkling clean!' What is the character likely using?

- A) Sarcasm
- B) Sincere praise
- C) A direct command
- D) A factual statement

Correct Answer: A

Explanation: The character is saying the opposite of what is true to create a humorous or critical effect. This is known as sarcasm.

### **Structure and Organization of Passages**

Question 216. A text that lists the reasons for an event, such as the decline of a civilization, is most likely using which organizational structure?

- A) Chronological order
- B) Compare and contrast
- C) Cause and effect
- D) Spatial order

Correct Answer: C

Explanation: This structure is used to explain the reasons why something happened (the causes) and the results of that event (the effects).

Question 217. Words like 'first,' 'next,' 'then,' and 'finally' are signal words for which type of text structure?

- A) Problem and solution
- B) Chronological or sequential order
- C) Compare and contrast
- D) Cause and effect

Correct Answer: B

Explanation: These transition words indicate the passage of time or the steps in a process, which are hallmarks of chronological or sequential organization.

Question 218. An article discusses the benefits of solar power versus the benefits of wind power. The author is primarily using which structure?

- A) Cause and effect
- B) Descriptive

- C) Problem and solution
- D) Compare and contrast

Correct Answer: D

Explanation: The article is focused on discussing the similarities and differences (in this case, the benefits) of two different subjects, which is the definition of a compare and contrast structure.

Question 219. A writer begins by stating that many students struggle with homework and then offers several study strategies to help them succeed. The structure is what?

- A) Chronological order
- B) Problem and solution
- C) Compare and contrast
- D) Spatial order

Correct Answer: B

Explanation: The passage is organized by first presenting a problem (students struggling with homework) and then proposing solutions (study strategies).

Question 220. A real estate listing describes a house by starting with the front yard, moving through the entryway, describing the first-floor rooms, and then the second-floor rooms. This is an example of what?

- A) Order of importance
- B) Cause and effect
- C) Spatial order
- D) Chronological order

Correct Answer: C

Explanation: The information is organized based on its location in a physical space, guiding the reader through the house as if they were walking through it.

## Vocabulary in Context

Question 221. The speaker's eloquent words captivated the audience; everyone listened intently to his powerful and persuasive speech. In this sentence, 'eloquent' most nearly means what?

- A) Loud and angry
- B) Simple and plain
- C) Fluent or persuasive in speaking or writing
- D) Confusing and unclear

Correct Answer: C

Explanation: The context clues 'captivated the audience' and 'powerful and persuasive speech' suggest that 'eloquent' means speaking in a skilled and convincing way.

Question 222. The new law will supersede the old one, making the previous regulations obsolete. The word 'supersede' means what?

- A) To take the place of
- B) To support
- C) To explain
- D) To weaken

Correct Answer: A

Explanation: The clue that the old regulations are now 'obsolete' (out of date) indicates that the new law has replaced, or superseded, them.

Question 223. He was a diligent student, always completing his assignments on time and studying hard for every test. 'Diligent' means what?

- A) Lazy
- B) Intelligent
- C) Hardworking and conscientious
- D) Popular

Correct Answer: C

Explanation: The examples given—completing assignments on time and studying hard—are behaviors of a diligent person, who shows care and effort in their work.

Question 224. The evidence was irrefutable; the suspect's fingerprints were on the weapon, leaving no doubt of his guilt. The word 'irrefutable' means what?

- A) Impossible to deny or disprove
- B) Questionable and uncertain
- C) Unimportant
- D) Secret

Correct Answer: A

Explanation: The phrase 'leaving no doubt of his guilt' is a direct clue that the evidence was so strong it could not be argued against or proven false.

Question 225. The politician's speech was full of platitudes, such as 'we must work together for a better future,' but it offered no specific plans. 'Platitudes' are what?

- A) New and innovative ideas
- B) Remarks or statements that have been used too often to be interesting or thoughtful
- C) Factual statistics
- D) Controversial opinions

Correct Answer: B

Explanation: The context that the speech 'offered no specific plans' and used a common, vague phrase suggests that platitudes are unoriginal, overused statements.

### Prefixes, Roots, and Suffixes

Question 226. The prefix 'mal-' in words like 'malfunction' or 'malicious' means what?

- A) Good
- B) Bad or evil
- C) Many

D) Before

Correct Answer: B

Explanation: 'Mal-' is a prefix that indicates something is bad, wrongful, or evil. A malfunction is a bad function; malicious means having bad intent.

Question 227. The root 'spect' in words like 'inspect,' 'spectator,' and 'perspective' relates to what?

- A) To hear
- B) To see or look
- C) To feel
- D) To carry

Correct Answer: B

Explanation: The Latin root 'spect' means to see or look. To inspect is to look at something closely; a spectator is someone who looks at an event.

Question 228. The suffix '-able' or '-ible' in words like 'readable' or 'flexible' means what?

- A) The state of being
- B) A person who
- C) Capable of being
- D) Full of

Correct Answer: C

Explanation: This suffix indicates that something is capable of being done. Readable means capable of being read; flexible means capable of being bent.

Question 229. In the word 'benefactor,' the prefix 'bene-' suggests what?

- A) That the person is evil.
- B) That the person is good or does good things.
- C) That there are two people.
- D) That the person is against something.

Correct Answer: B

Explanation: The prefix 'bene-' means good or well. A benefactor is a person who does good by giving help or money to a person or cause.

Question 230. The root 'cred' means 'to believe.' Which of the following words means 'unwilling or unable to believe something'?

- A) Credible
- B) Credit
- C) Incredulous
- D) Creed

Correct Answer: C

Explanation: The prefix 'in-' means 'not.' Therefore, incredulous means not believing.

### **High-Frequency TACHS Vocabulary List**

Question 231. Which word is a synonym for 'superficial'?

- A) Deep
- B) Thorough
- C) On the surface; not profound
- D) Intelligent

Correct Answer: C

Explanation: Superficial means existing or occurring at or on the surface. It is used to describe something that lacks depth or thoroughness.

Question 232. To 'validate' a theory means to do what?

- A) To prove it wrong.
- B) To check or prove the accuracy of something.
- C) To create a new theory.
- D) To ignore the evidence.

Correct Answer: B

Explanation: To validate is to confirm or substantiate. In a scientific context, it means finding evidence that supports a theory.

Question 233. An 'ambiguous' statement is one that is what?

- A) Clear and precise
- B) Loud and angry
- C) Open to more than one interpretation; unclear
- D) Factual and proven

Correct Answer: C

Explanation: Ambiguity arises when a word, phrase, or statement has more than one possible meaning, making it unclear.

Question 234. If a person is 'lethargic,' they are what?

- A) Full of energy
- B) Sluggish and apathetic; lacking energy
- C) Angry and aggressive
- D) Happy and cheerful

Correct Answer: B

Explanation: Lethargy is a state of tiredness, weariness, or lack of energy.

Question 235. What does the word 'inevitable' mean?

- A) Unlikely to happen
- B) Surprising
- C) Certain to happen; unavoidable
- D) Unimportant

Correct Answer: C

Explanation: If something is inevitable, it cannot be avoided or prevented from happening.

## Grammar and Usage Essentials

Question 236. Choose the correct words to complete the sentence: ' \_\_\_ going to the park, but \_\_\_ running late.'

- A) Their, they're
- B) They're, their
- C) There, they're
- D) They're, they're

Correct Answer: D

Explanation: The first blank needs the contraction for 'they are,' which is 'they're.' The second blank also needs 'they are,' so 'they're' is correct again.

Question 237. 'The number of students in the class \_\_\_ small.'

- A) are
- B) were
- C) is
- D) have been

Correct Answer: C

Explanation: When the phrase 'the number' is the subject, it is singular and requires a singular verb. 'The number... is.' If the subject were 'A number of students,' the verb would be plural ('are').

Question 238. Which of the following sentences is grammatically correct?

- A) Her and her friends are studying.
- B) She and her friends is studying.
- C) Her and her friends is studying.
- D) She and her friends are studying.

Correct Answer: D

Explanation: 'She' is the correct subject pronoun. The subject 'She and her friends' is plural, so it requires the plural verb 'are.'

Question 239. 'The team played \_\_\_ despite the bad weather.'

- A) good
- B) well
- C) more good
- D) best

Correct Answer: B

Explanation: 'Well' is an adverb that modifies the verb 'played.' 'Good' is an adjective and cannot describe how an action is performed.

Question 240. 'I have \_\_\_ books than my sister.'

- A) less
- B) fewer
- C) lesser
- D) few

Correct Answer: B

Explanation: Use 'fewer' for countable nouns (like books). Use 'less' for uncountable nouns (like water or time).

### **Sentence Types and Agreement Rules**

Question 241. 'The committee \_\_\_ its decision tomorrow.'

- A) are announcing
- B) announce
- C) announces
- D) have announced

Correct Answer: C

Explanation: A collective noun like 'committee' is treated as a single unit, so it takes a singular verb. 'Announces' is the correct singular, present-tense verb (used here to indicate a future scheduled event).

Question 242. 'Either the cat or the dogs \_\_\_ responsible for the mess.'

- A) is
- B) was
- C) are
- D) has been

Correct Answer: C

Explanation: With 'either/or,' the verb agrees with the subject closer to it. 'Dogs' is plural, so the plural verb 'are' is correct.

Question 243. Which of the following is a run-on sentence?

- A) I like to read, but my brother prefers to watch movies.
- B) I like to read my brother prefers to watch movies.
- C) I like to read. My brother prefers to watch movies.
- D) Although I like to read, my brother prefers to watch movies.

Correct Answer: B

Explanation: A run-on sentence occurs when two or more independent clauses are joined without proper punctuation or conjunction. Option B incorrectly fuses two complete sentences together.

Question 244. 'The girl with the long braids \_\_\_ in my class.'

- A) are
- B) were
- C) is
- D) have

Correct Answer: C

Explanation: The subject of the sentence is 'girl,' which is singular. The prepositional phrase 'with the long braids' does not affect the verb. Therefore, the singular verb 'is' is correct.

Question 245. 'Because it was raining' is an example of what?

- A) A simple sentence
- B) A compound sentence
- C) A sentence fragment
- D) A complete sentence

Correct Answer: C

Explanation: This is a dependent clause. It has a subject and a verb but cannot stand on its own as a complete thought. It is a sentence fragment.

### **Verb Tense and Consistency**

Question 246. Which sentence demonstrates a logical shift in verb tense?

- A) The dinosaurs roamed the Earth millions of years ago, but they are now extinct.
- B) The dinosaurs roam the Earth, but they were now extinct.
- C) The dinosaurs roamed the Earth, but they are now being extinct.
- D) The dinosaurs were roaming the Earth, but they are now extincted.

Correct Answer: A

Explanation: This sentence correctly uses the past tense ('roamed') to describe a past event and the present tense ('are') to describe a current state. The shift is logical and necessary to convey the meaning.

Question 247. 'Last week, the students \_\_\_ a play for their parents.'

- A) perform
- B) will perform
- C) performed
- D) have performed

Correct Answer: C

Explanation: The phrase 'Last week' clearly indicates that the action happened in the past, so the simple past tense 'performed' is required.

Question 248. 'I was watching a movie when the power suddenly \_\_\_ out.'

- A) goes
- B) went
- C) has gone
- D) will go

Correct Answer: B

Explanation: The main clause is in the past progressive tense ('was watching'). The interrupting action should be in the simple past tense ('went').

Question 249. 'By this time next year, I \_\_\_ from college.'

- A) will graduate
- B) graduated
- C) graduate
- D) will have graduated

Correct Answer: D

Explanation: The future perfect tense ('will have graduated') is used to describe an action that will be completed before a specific point in the future.

Question 250. 'She \_\_\_ in this city for ten years.'

- A) lives
- B) is living
- C) has lived
- D) lived

Correct Answer: C

Explanation: The present perfect tense ('has lived') is used to describe an action that began in the past and continues into the present. The phrase 'for ten years' indicates this duration.

### **Modifiers and Parallel Structure**

Question 251. Which sentence has a misplaced modifier?

- A) The girl in the red coat is my sister.
- B) I saw a puppy on the way to the store.
- C) Covered in mud, the pig oinked happily.
- D) The man returned the wallet to the woman that he found.

Correct Answer: D

Explanation: The modifier 'that he found' is misplaced. It sounds like the man found the woman. It should be placed next to the word it modifies: 'The man returned the wallet that he found to the woman.'

Question 252. Which sentence demonstrates correct parallel structure?

- A) The manager's goals are to increase sales, improving customer service, and a reduction in costs.
- B) The manager's goals are increasing sales, to improve customer service, and reducing costs.
- C) The manager's goals are to increase sales, to improve customer service, and to reduce costs.
- D) The manager's goals are to increase sales, improving customer service, and to reduce costs.

Correct Answer: C

Explanation: To maintain parallel structure, all items in the list should be in the same grammatical form. In this case, all three goals are expressed as infinitives ('to increase,' 'to improve,' 'to reduce').

Question 253. 'To win the race, \_\_\_ is required.'

- A) both speed and endurance
- B) having speed and to be enduring
- C) being fast and to have endurance
- D) speed and to endure

Correct Answer: A

Explanation: The phrase 'both speed and endurance' provides a clear and parallel structure, using two nouns to complete the thought.

Question 254. 'Driving through the mountains, the scenery was breathtaking.' How should this sentence be corrected?

- A) The scenery was breathtaking, driving through the mountains.
- B) Driving through the mountains, we saw breathtaking scenery.
- C) The breathtaking scenery was seen driving through the mountains.
- D) The sentence is correct as is.

Correct Answer: B

Explanation: The original sentence has a dangling modifier; it implies the scenery was driving. The corrected version clarifies who was performing the action ('we').

Question 255. 'My new car is sleek, fast, and \_\_\_\_.'

- A) it is reliable
- B) has reliability
- C) reliability
- D) reliable

Correct Answer: D

Explanation: The list contains two adjectives ('sleek,' 'fast'). To maintain parallel structure, the third item in the list must also be an adjective ('reliable').

## **Punctuation and Mechanics**

Question 256. Which sentence is punctuated correctly?

- A) My favorite teacher, Mr. Smith, is retiring this year.
- B) My favorite teacher Mr. Smith is retiring this year.
- C) My favorite teacher, Mr. Smith is retiring this year.

D) My favorite teacher Mr. Smith, is retiring this year.

Correct Answer: A

Explanation: 'Mr. Smith' is an appositive that renames 'My favorite teacher.' Since it is non-essential information, it should be set off by commas.

Question 257. 'The storm was fierce\_\_\_ nevertheless, the house remained standing.' Which punctuation mark is needed?

- A) a comma (,)
- B) a semicolon (;)
- C) a colon (:)
- D) a period (.)

Correct Answer: B

Explanation: A semicolon is used to connect two closely related independent clauses. It is often used with a conjunctive adverb like 'nevertheless.'

Question 258. Which sentence uses the apostrophe correctly?

- A) The dog lost its' collar.
- B) The dogs's bone was buried in the yard.
- C) The dogs' bowls were all empty.
- D) The dog wagged it's tail.

Correct Answer: C

Explanation: 'Dogs" correctly shows the possessive form for the plural noun 'dogs.' 'Its' is possessive and has no apostrophe. 'It's' means 'it is.' 'Dogs's' is incorrect.

Question 259. 'We are going on vacation in \_\_\_,' she announced.

- A) july
- B) July.
- C) July

D) july.

Correct Answer: C

Explanation: The names of months are proper nouns and must be capitalized. No punctuation is needed after 'July' because the sentence continues with the tag 'she announced.'

Question 260. Which sentence uses quotation marks correctly?

- A) "I think," he said, "that we should leave now."
- B) "I think, he said, that we should leave now."
- C) "I think" he said, "that we should leave now."
- D) "I think, he said that we should leave now."

Correct Answer: A

Explanation: When a quote is interrupted by a speaker tag like 'he said,' a comma is placed after the first part of the quote and after the tag.

### Common Confused Words

Question 261. The new building on campus will \_\_\_ the library.

- A) compliment
- B) complement
- C) comppliment
- D) complament

Correct Answer: B

Explanation: 'Complement' means to complete or go well with. 'Compliment' means to praise.

Question 262. Are you \_\_\_ finished with your homework?

- A) all ready
- B) already
- C) allready
- D) already

Correct Answer: B

Explanation: 'Already' is an adverb that means 'before now' or 'so soon.' 'All ready' means 'completely prepared.'

Question 263. The \_\_\_ of the story is that honesty is the best policy.

- A) moral
- B) morale
- C) morel
- D) mural

Correct Answer: A

Explanation: 'Moral' refers to the lesson of a story. 'Morale' refers to the confidence or enthusiasm of a person or group.

Question 264. Please be quiet in the library; you are talking \_\_\_ loudly.

- A) to
- B) too
- C) two
- D) tue

Correct Answer: B

Explanation: 'Too' is an adverb meaning 'excessively' or 'also.' 'To' is a preposition. 'Two' is the number.

Question 265. The desert climate is known for its \_\_\_ and hot weather.

- A) arid
- B) arid
- C) errid
- D) aride

Correct Answer: A

Explanation: 'Arid' means having little or no rain; too dry to support vegetation.

### Practice Review: Reading & Language

Question 266. A passage describes the beauty of the Grand Canyon using vivid, emotional language, focusing on the awe-inspiring vistas and majestic colors. The author's tone is best described as what?

- A) Objective and clinical
- B) Sarcastic and critical
- C) Reverent and admiring
- D) Humorous and lighthearted

Correct Answer: C

Explanation: The use of words like 'awe-inspiring' and 'majestic' indicates a tone of deep respect, admiration, and reverence for the subject.

Question 267. 'The jury, after deliberating for three days, has reached \_\_\_ verdict.'

- A) their
- B) its
- C) it's
- D) they're

Correct Answer: B

Explanation: A collective noun like 'jury' is treated as a single unit, so it takes the singular possessive pronoun 'its.'

Question 268. The word 'voracious,' as in 'a voracious reader,' means what?

- A) Reading very slowly and carefully.
- B) Disliking books.
- C) Wanting or devouring great quantities of something.

D) Reading only non-fiction.

Correct Answer: C

Explanation: Voracious describes a huge appetite for something, whether it's food or, in this case, reading.

Question 269. Which of the following sentences is a compound-complex sentence?

- A) The dog barked.
- B) The dog barked, and the cat ran away.
- C) When the dog barked, the cat ran away.
- D) When the dog barked, the cat ran away, and I jumped in surprise.

Correct Answer: D

Explanation: A compound-complex sentence has at least two independent clauses ('the cat ran away' and 'I jumped in surprise') and at least one dependent clause ('When the dog barked').

Question 270. 'Hoping to get a better view, the binoculars were used.' How should this sentence be corrected?

- A) The binoculars were used, hoping to get a better view.
- B) Hoping to get a better view, I used the binoculars.
- C) The view was better using the binoculars.
- D) The sentence is correct as is.

Correct Answer: B

Explanation: The original sentence has a dangling modifier, implying the binoculars were hoping. The corrected version clarifies who was performing the action ('I').

## Part II — Mathematics

### Number Sense and Operations

Question 271. What is the value of  $|-8| + |3|$ ?

- A) -11
- B) -5
- C) 5
- D) 11

Correct Answer: D

Explanation: The absolute value of a number is its distance from zero.  $|-8| = 8$  and  $|3| = 3$ . So,  $8 + 3 = 11$ .

Question 272. Evaluate:  $7 - (-4) + 5$ .

- A) -2
- B) 6
- C) 16
- D) 8

Correct Answer: C

Explanation: Subtracting a negative number is the same as adding its positive counterpart. So,  $7 - (-4)$  becomes  $7 + 4$ . The expression is  $7 + 4 + 5 = 11 + 5 = 16$ .

Question 273. Which number is the largest?

- A) -10
- B) -5
- C) 0
- D) -20

Correct Answer: C

Explanation: On a number line, the numbers farthest to the right are the largest. Zero is to the right of all negative numbers, making it the largest value in this set.

Question 274. Write the number 3,450,000 in scientific notation.

- A)  $3.45 \times 10^6$
- B)  $3.45 \times 10^5$
- C)  $34.5 \times 10^5$
- D)  $0.345 \times 10^7$

Correct Answer: A

Explanation: To write a number in scientific notation, move the decimal point until there is only one non-zero digit to its left. We move the decimal 6 places to the left, so the exponent is 6. The result is  $3.45 \times 10^6$ .

Question 275. What is the prime factorization of 60?

- A)  $6 \times 10$
- B)  $2 \times 3 \times 10$
- C)  $2^2 \times 3 \times 5$
- D)  $4 \times 15$

Correct Answer: C

Explanation: Prime factorization means writing a number as a product of its prime factors.  $60 = 6 \times 10 = (2 \times 3) \times (2 \times 5) = 2 \times 2 \times 3 \times 5 = 2^2 \times 3 \times 5$ .

### Fractions, Decimals, and Percents

Question 276. A jacket is priced at \$80. It is on sale for 30% off. What is the final price after a 10% sales tax is added to the discounted price?

- A) \$58.40
- B) \$61.60
- C) \$64.00
- D) \$50.40

Correct Answer: B

Explanation: First, find the discount: 30% of \$80 is  $0.30 \times 80 = \$24$ . The sale price is  $\$80 - \$24 = \$56$ . Next, find the sales tax: 10% of \$56 is  $0.10 \times 56 = \$5.60$ . The final price is  $\$56 + \$5.60 = \$61.60$ .

Question 277. Calculate:  $2 \frac{1}{2} \div 1 \frac{1}{4}$

- A) 1
- B) 2
- C)  $2 \frac{1}{2}$
- D)  $3 \frac{1}{8}$

Correct Answer: B

Explanation: First, convert the mixed numbers to improper fractions:  $2 \frac{1}{2} = \frac{5}{2}$  and  $1 \frac{1}{4} = \frac{5}{4}$ . To divide by a fraction, multiply by its reciprocal:  $\frac{5}{2} \div \frac{5}{4} = \frac{5}{2} \times \frac{4}{5} = \frac{20}{10}$ , which equals 2.

Question 278. The price of a stock increased from \$50 to \$60. What was the percent increase?

- A) 10%
- B) 16.7%
- C) 20%
- D) 25%

Correct Answer: C

Explanation: The formula for percent increase is  $(\text{New Value} - \text{Original Value}) / \text{Original Value} \times 100$ . The increase in price is  $\$60 - \$50 = \$10$ . The percent increase is  $(\$10 / \$50) \times 100 = 0.2 \times 100 = 20\%$ .

Question 279. Arrange the following from least to greatest: 0.6,  $3/5$ , 65%.

- A)  $3/5$ , 0.6, 65%
- B) 0.6,  $3/5$ , 65%
- C)  $3/5$ , 65%, 0.6
- D) 65%, 0.6,  $3/5$

Correct Answer: A

Explanation: To compare, convert all values to the same format, like decimals.  $3/5 = 0.6$ .  $65\% = 0.65$ . So we are comparing 0.6, 0.6, and 0.65. The two first values are equal. The correct order from least to greatest is  $3/5$  and 0.6 (which are equal), followed by 65%. Option A reflects this.

Question 280. What is 0.5% of 400?

- A) 200
- B) 20
- C) 2
- D) 0.2

Correct Answer: C

Explanation: First, convert the percentage to a decimal:  $0.5\% = 0.005$ . Then, multiply by the number:  $0.005 \times 400 = 2$ .

### Ratios, Rates, and Proportions

Question 281. A machine can produce 150 widgets in 30 minutes. At this rate, how many widgets can it produce in 2 hours?

- A) 300
- B) 450
- C) 600
- D) 750

Correct Answer: C

Explanation: First, find the production rate per minute:  $150 \text{ widgets} / 30 \text{ minutes} = 5 \text{ widgets per minute}$ . There are 60 minutes in an hour, so 2 hours is 120 minutes. Total production =  $5 \text{ widgets/minute} \times 120 \text{ minutes} = 600 \text{ widgets}$ .

Question 282. The ratio of the lengths of the sides of a triangle is 3:4:5. If the perimeter of the triangle is 60 inches, what is the length of the longest side?

- A) 15 inches
- B) 20 inches
- C) 25 inches
- D) 30 inches

Correct Answer: C

Explanation: The sum of the ratio parts is  $3 + 4 + 5 = 12$  parts. The total perimeter is 60 inches. The value of one part is  $60 / 12 = 5$  inches. The longest side corresponds to the largest ratio part (5). Its length is 5 parts  $\times$  5 inches/part = 25 inches.

Question 283. A car uses 5 gallons of gasoline to travel 120 miles. How many gallons will it need to travel 300 miles?

- A) 10 gallons
- B) 12.5 gallons
- C) 15 gallons
- D) 24 gallons

Correct Answer: B

Explanation: First, find the car's fuel efficiency:  $120 \text{ miles} / 5 \text{ gallons} = 24 \text{ miles per gallon}$ . Then, divide the total distance by the fuel efficiency:  $300 \text{ miles} / 24 \text{ mpg} = 12.5 \text{ gallons}$ .

Question 284. If 3 pounds of coffee cost \$18, what is the cost of 10 pounds of coffee?

- A) \$30
- B) \$54
- C) \$60
- D) \$180

Correct Answer: C

Explanation: First, find the cost per pound:  $\$18 / 3 \text{ pounds} = \$6 \text{ per pound}$ . Then, multiply by the desired weight:  $\$6/\text{pound} \times 10 \text{ pounds} = \$60$ .

Question 285. A map has a scale of 1 cm : 20 km. If the distance between two cities on the map is 8.5 cm, what is the actual distance?

- A) 17 km
- B) 85 km
- C) 160 km
- D) 170 km

Correct Answer: D

Explanation: Set up a proportion:  $(1 \text{ cm} / 20 \text{ km}) = (8.5 \text{ cm} / x \text{ km})$ . Cross-multiply or simply multiply the map distance by the scale factor:  $8.5 \times 20 = 170 \text{ km}$ .

#### Algebra Readiness

Question 286. Simplify the expression:  $3(x + 2y) - 2(x - y)$

- A)  $x + 8y$
- B)  $x + 4y$
- C)  $5x + 4y$
- D)  $5x + 8y$

Correct Answer: A

Explanation: First, use the distributive property:  $3x + 6y - 2x + 2y$ . Then, combine like terms:  $(3x - 2x) + (6y + 2y) = x + 8y$ .

Question 287. If  $a = 3$  and  $b = -2$ , what is the value of  $a^2 - b^3$ ?

- A) 1
- B) 5
- C) 13
- D) 17

Correct Answer: D

Explanation: Substitute the values into the expression:  $(3)^2 - (-2)^3$ . Calculate the exponents:  $9 - (-8)$ . Subtracting a negative is the same as adding the positive:  $9 + 8 = 17$ .

Question 288. Which expression represents 'the sum of three consecutive integers' if the first integer is  $n$ ?

- A)  $n + (n+1) + (n+2)$
- B)  $n + n + n$
- C)  $3n + 6$
- D)  $n(n+1)(n+2)$

Correct Answer: A

Explanation: If the first integer is  $n$ , the next consecutive integer is  $n+1$ , and the one after that is  $n+2$ . Their sum is  $n + (n+1) + (n+2)$ . This can also be simplified to  $3n + 3$ .

Question 289. What is the result of  $(5x^2 + 3x - 2) + (2x^2 - 5x + 7)$ ?

- A)  $7x^2 - 2x + 5$
- B)  $7x^2 + 2x + 5$
- C)  $3x^2 - 8x + 9$
- D)  $7x^4 - 2x^2 + 5$

Correct Answer: A

Explanation: Combine like terms:  $(5x^2 + 2x^2) + (3x - 5x) + (-2 + 7) = 7x^2 - 2x + 5$ .

Question 290. Factor the expression:  $4x + 8y$

- A)  $4(x + 2y)$
- B)  $2(2x + 4y)$
- C)  $8(x/2 + y)$
- D)  $4(x + 8y)$

Correct Answer: A

Explanation: The greatest common factor of  $4x$  and  $8y$  is 4. Factoring out 4 leaves  $(x + 2y)$ . So, the factored form is  $4(x + 2y)$ .

### Solving Equations and Inequalities

Question 291. Solve for  $x$ :  $5x - 3 = 2x + 9$

- A)  $x = 2$
- B)  $x = 3$
- C)  $x = 4$
- D)  $x = 6$

Correct Answer: C

Explanation: First, get the  $x$  terms on one side by subtracting  $2x$  from both sides:  $3x - 3 = 9$ . Then, add 3 to both sides:  $3x = 12$ . Finally, divide by 3:  $x = 4$ .

Question 292. Solve for  $b$ :  $(2/3)b = 12$

- A)  $b = 8$
- B)  $b = 12$
- C)  $b = 18$
- D)  $b = 24$

Correct Answer: C

Explanation: To isolate  $b$ , multiply both sides by the reciprocal of  $2/3$ , which is  $3/2$ .  $b = 12(3/2) = 36 / 2 = 18$ .

Question 293. Which of the following values for  $y$  makes the inequality  $15 - 2y \leq 7$  true?

- A) 2
- B) 3
- C) 0
- D) 4

Correct Answer: D

Explanation: First, solve the inequality. Subtract 15 from both sides:  $-2y \leq -8$ . Divide both sides by -2 and remember to reverse the inequality sign:  $y \geq 4$ . The only value that is greater than or equal to 4 is 4.

Question 294. Solve for x:  $x/2 + 5 = 9$

- A)  $x = 2$
- B)  $x = 4$
- C)  $x = 7$
- D)  $x = 8$

Correct Answer: D

Explanation: Subtract 5 from both sides:  $x/2 = 4$ . Multiply both sides by 2:  $x = 8$ .

Question 295. The sum of two numbers is 25. One number is 9 more than the other. What are the two numbers?

- A) 7 and 16
- B) 8 and 17
- C) 9 and 16
- D) 10 and 15

Correct Answer: B

Explanation: Let the smaller number be x. The larger number is  $x + 9$ . Their sum is  $x + (x + 9) = 25$ . Simplify:  $2x + 9 = 25$ . Subtract 9:  $2x = 16$ . Solve for x:  $x = 8$ . The two numbers are 8 and  $8 + 9 = 17$ .

### Translating Word Problems into Algebra

Question 296. A phone plan costs \$20 per month plus \$0.10 per text message. Which equation represents the total monthly cost (C) for sending (t) text messages?

- A)  $C = 20t + 0.10$

- B)  $C = 20.10t$
- C)  $C = 20 + 0.10t$
- D)  $t = 20 + 0.10C$

Correct Answer: C

Explanation: The total cost is the fixed monthly fee (\$20) plus the variable cost, which is the price per text (\$0.10) times the number of texts (t). This gives the equation  $C = 20 + 0.10t$ .

Question 297. A rectangular garden's perimeter is 54 feet. Its length is 3 feet longer than twice its width. If 'w' is the width, which equation represents this situation?

- A)  $w + (2w + 3) = 54$
- B)  $2w + 2(2w + 3) = 54$
- C)  $w(2w + 3) = 54$
- D)  $2w + 3 = 54$

Correct Answer: B

Explanation: The width is w. The length is  $2w + 3$ . The perimeter of a rectangle is  $2(\text{length}) + 2(\text{width})$ . Substituting the expressions gives  $2(2w + 3) + 2w = 54$ .

Question 298. A movie theater sold 150 tickets. Adult tickets cost \$12 and child tickets cost \$8. If the total revenue was \$1560, which system of equations can be used to find the number of adult (a) and child (c) tickets sold?

- A)  $a + c = 150$  and  $12a + 8c = 1560$
- B)  $a + c = 1560$  and  $12a + 8c = 150$
- C)  $a + c = 150$  and  $20(a+c) = 1560$
- D)  $12a = 1560$  and  $8c = 1560$

Correct Answer: A

Explanation: The first equation represents the total number of tickets:  $a + c = 150$ . The second equation represents the total revenue from the tickets:  $12a$  (revenue from adult tickets) +  $8c$  (revenue from child tickets) = \$1560.

Question 299. Sarah has a collection of dimes (d) and quarters (q) worth \$5.80. She has a total of 34 coins. Which equation represents the total value of the coins?

- A)  $d + q = 5.80$
- B)  $34(d + q) = 5.80$
- C)  $0.10d + 0.25q = 5.80$
- D)  $d + q = 34$

Correct Answer: C

Explanation: The value of the dimes is the number of dimes (d) times their value (\$0.10). The value of the quarters is the number of quarters (q) times their value (\$0.25). The sum of these values equals the total amount, \$5.80.

Question 300. A number is decreased by 10, and the result is then multiplied by 3. The final result is 45. Which equation matches this description?

- A)  $3n - 10 = 45$
- B)  $3(n - 10) = 45$
- C)  $10 - 3n = 45$
- D)  $n - 103 = 45$

Correct Answer: B

Explanation: Let the number be n. 'Decreased by 10' is  $n - 10$ . 'The result is then multiplied by 3' means the entire quantity  $(n - 10)$  is multiplied by 3, which is written as  $3(n - 10)$ . This equals 45.

### Patterns, Sequences, and Functions

Question 301. What is the next number in the sequence:  $1/2, 1, 2, 4, \underline{\hspace{1cm}}$ ?

- A) 6
- B) 8
- C) 10
- D) 16

Correct Answer: B

Explanation: This is a geometric sequence where each term is multiplied by 2 to get the next term.  
 $42 = 8$ .

Question 302. What is the next term in the pattern: A, C, E, G, \_\_\_?

- A) H
- B) I
- C) J
- D) K

Correct Answer: B

Explanation: The pattern consists of skipping one letter of the alphabet each time. After G, H is skipped, so the next letter is I.

Question 303. A function is defined by the rule  $f(x) = x^2 + 3$ . What is the value of  $f(-4)$ ?

- A) -13
- B) 19
- C) -5
- D) 11

Correct Answer: B

Explanation: Substitute -4 for x:  $f(-4) = (-4)^2 + 3$ .  $(-4)(-4) = 16$ . So,  $f(-4) = 16 + 3 = 19$ .

Question 304. Look at the pattern: 1, 3, 6, 10, 15, \_\_\_. What number comes next?

- A) 20
- B) 21
- C) 22
- D) 25

Correct Answer: B

Explanation: These are the triangular numbers. The pattern is to add a consecutively increasing number: +2, +3, +4, +5. The next step is to add 6.  $15 + 6 = 21$ .

Question 305. If a function's input (x) and output (y) are shown in the table below, what is the function rule?

(x: 1, 2, 3)

(y: 1, 4, 9)

A)  $y = 2x - 1$

B)  $y = x + 0$

C)  $y = 3x - 2$

D)  $y = x^2$

Correct Answer: D

Explanation: The output is the square of the input.  $1^2=1$ ,  $2^2=4$ ,  $3^2=9$ . The rule is  $y = x^2$ .

### Geometry and Measurement

Question 306. A right triangle has legs with lengths of 6 cm and 8 cm. What is the length of the hypotenuse?

A) 10 cm

B) 12 cm

C) 14 cm

D) 28 cm

Correct Answer: A

Explanation: Use the Pythagorean theorem:  $a^2 + b^2 = c^2$ .  $6^2 + 8^2 = c^2$ .  $36 + 64 = c^2$ .  $100 = c^2$ . Taking the square root of both sides,  $c = 10$  cm.

Question 307. What is the measure of one interior angle of a regular octagon?

A)  $108^\circ$

B)  $120^\circ$

C)  $135^\circ$

D)  $144^\circ$

Correct Answer: C

Explanation: The formula for the sum of interior angles is  $(n-2)180^\circ$ . For an octagon ( $n=8$ ), the sum is  $(8-2)180^\circ = 6180^\circ = 1080^\circ$ . Since it's a regular octagon, all angles are equal. Divide the sum by the number of angles:  $1080^\circ / 8 = 135^\circ$ .

Question 308. Two angles are supplementary. If one angle measures  $75^\circ$ , what is the measure of the other angle?

A)  $15^\circ$

B)  $25^\circ$

C)  $105^\circ$

D)  $285^\circ$

Correct Answer: C

Explanation: Supplementary angles add up to  $180^\circ$ . So,  $180^\circ - 75^\circ = 105^\circ$ .

Question 309. How many feet are in 4 yards?

A) 10

B) 12

C) 16

D) 40

Correct Answer: B

Explanation: There are 3 feet in 1 yard. So,  $4 \text{ yards} \times 3 \text{ feet/yard} = 12 \text{ feet}$ .

Question 310. What is the area of a trapezoid with bases of 10 inches and 14 inches, and a height of 6 inches?

A) 72 sq in

B) 84 sq in

C) 144 sq in

D) 30 sq in

Correct Answer: A

Explanation: The formula for the area of a trapezoid is  $A = \frac{1}{2}(b_1 + b_2)h$ .  $A = \frac{1}{2}(10 + 14)6 = \frac{1}{2}(24)6 = 126 = 72$  square inches.

### Lines, Angles, and Polygons

Question 311. An angle that measures exactly  $90^\circ$  is called what?

- A) An acute angle
- B) An obtuse angle
- C) A straight angle
- D) A right angle

Correct Answer: D

Explanation: A right angle is defined as an angle of 90 degrees.

Question 312. A polygon with four equal sides and four right angles is a what?

- A) Rhombus
- B) Rectangle
- C) Square
- D) Trapezoid

Correct Answer: C

Explanation: A square is the only quadrilateral that has both four equal sides and four right angles. A rhombus has four equal sides but not necessarily right angles. A rectangle has four right angles but not necessarily equal sides.

Question 313. Vertical angles are always what?

- A) Supplementary
- B) Complementary

C) Congruent

D) Adjacent

Correct Answer: C

Explanation: Vertical angles are the angles opposite each other when two lines cross. They are always congruent (equal in measure).

Question 314. What is the name of a polygon with ten sides?

A) Octagon

B) Nonagon

C) Decagon

D) Dodecagon

Correct Answer: C

Explanation: A decagon is a ten-sided polygon. An octagon has 8 sides, a nonagon has 9, and a dodecagon has 12.

Question 315. If two angles of a triangle are  $30^\circ$  and  $60^\circ$ , what kind of triangle is it?

A) Acute

B) Obtuse

C) Right

D) Equilateral

Correct Answer: C

Explanation: The sum of angles in a triangle is  $180^\circ$ . The third angle is  $180^\circ - (30^\circ + 60^\circ) = 180^\circ - 90^\circ = 90^\circ$ . A triangle with a  $90^\circ$  angle is a right triangle.

Area, Perimeter, Surface Area, and Volume

Question 316. A circular swimming pool has a diameter of 20 feet. What is its area? (Use  $\pi \approx 3.14$ )

A) 62.8 sq ft

- B) 314 sq ft
- C) 1256 sq ft
- D) 400 sq ft

Correct Answer: B

Explanation: The diameter is 20 ft, so the radius is 10 ft. The area formula is  $A = \pi r^2$ .  $A = 3.14(10)^2 = 3.14100 = 314$  square feet.

Question 317. A rectangular room is 15 feet long and 12 feet wide. What is its perimeter?

- A) 27 ft
- B) 54 ft
- C) 180 ft
- D) 90 ft

Correct Answer: B

Explanation: The perimeter of a rectangle is  $P = 2l + 2w$ .  $P = 2(15) + 2(12) = 30 + 24 = 54$  feet.

Question 318. What is the volume of a sphere with a radius of 3 inches? (Use  $V = (4/3)\pi r^3$ )

- A)  $9\pi$  cubic in
- B)  $12\pi$  cubic in
- C)  $36\pi$  cubic in
- D)  $108\pi$  cubic in

Correct Answer: C

Explanation: Substitute the radius into the formula:  $V = (4/3)\pi(3)^3$ .  $V = (4/3)\pi(27)$ .  $V = 49\pi = 36\pi$  cubic inches.

Question 319. A cube has a volume of 64 cubic centimeters. What is the length of one of its sides?

- A) 2 cm
- B) 4 cm
- C) 8 cm

D) 16 cm

Correct Answer: B

Explanation: The volume of a cube is  $V = s^3$ . To find the side length, find the cube root of the volume. The cube root of 64 is 4, because  $4 \times 4 \times 4 = 64$ .

Question 320. What is the surface area of a rectangular prism with dimensions 5m x 4m x 3m?

A) 60 m<sup>2</sup>

B) 47 m<sup>2</sup>

C) 94 m<sup>2</sup>

D) 120 m<sup>2</sup>

Correct Answer: C

Explanation: The formula for surface area is  $SA = 2(lw + lh + wh)$ .  $SA = 2((5 \times 4) + (5 \times 3) + (4 \times 3)) = 2(20 + 15 + 12) = 2(47) = 94$  square meters.

### Coordinate Geometry

Question 321. What is the slope of the line passing through the points (2, 5) and (4, 9)?

A) 1/2

B) 2

C) -2

D) 7

Correct Answer: B

Explanation: The slope formula is  $m = (y_2 - y_1) / (x_2 - x_1)$ .  $m = (9 - 5) / (4 - 2) = 4 / 2 = 2$ .

Question 322. A point is located at (5, 0). Where does this point lie?

A) In Quadrant I

B) In Quadrant IV

C) On the x-axis

D) On the y-axis

Correct Answer: C

Explanation: Any point with a y-coordinate of 0 lies on the x-axis.

Question 323. What is the midpoint of a line segment with endpoints at (1, 3) and (7, 9)?

A) (3, 3)

B) (4, 6)

C) (8, 12)

D) (6, 6)

Correct Answer: B

Explanation: The midpoint formula is  $((x_1+x_2)/2, (y_1+y_2)/2)$ . Midpoint =  $((1+7)/2, (3+9)/2) = (8/2, 12/2) = (4, 6)$ .

Question 324. If you translate the point (-2, 3) four units to the right and two units down, what are the new coordinates?

A) (2, 1)

B) (-6, 1)

C) (2, 5)

D) (-6, 5)

Correct Answer: A

Explanation: Translating four units right means adding 4 to the x-coordinate:  $-2 + 4 = 2$ . Translating two units down means subtracting 2 from the y-coordinate:  $3 - 2 = 1$ . The new point is (2, 1).

Question 325. A line has the equation  $y = 3x - 4$ . What is its y-intercept?

A) 3

B) -4

C) 4

D) -3

Correct Answer: B

Explanation: The equation is in slope-intercept form ( $y = mx + b$ ), where 'b' is the y-intercept. In this equation,  $b = -4$ .

### Data, Statistics, and Probability

Question 326. A scatter plot shows that as the number of hours spent studying increases, test scores also tend to increase. This indicates what kind of correlation?

- A) Positive correlation
- B) Negative correlation
- C) No correlation
- D) Causal correlation

Correct Answer: A

Explanation: A positive correlation exists when both variables tend to move in the same direction. As one increases, the other increases.

Question 327. A survey asks people to name their favorite color. What type of graph would be best to show the number of people who chose each color?

- A) Line graph
- B) Bar graph
- C) Scatter plot
- D) Circle graph

Correct Answer: B

Explanation: A bar graph is ideal for comparing the frequencies of different categories, such as favorite colors.

Question 328. A box-and-whisker plot is used to display what?

- A) The exact value of every piece of data.
- B) The relationship between two different variables.

C) The five-number summary of a data set (minimum, Q1, median, Q3, maximum).

D) The change in data over time.

Correct Answer: C

Explanation: A box-and-whisker plot provides a visual representation of the spread and central tendency of data through its five-number summary.

Question 329. A table shows the population of a town over 50 years. To best visualize the town's growth trend, which graph should be used?

A) Pie chart

B) Line graph

C) Bar chart

D) Stem-and-leaf plot

Correct Answer: B

Explanation: A line graph is the best choice for showing how a continuous data value (population) changes over time.

Question 330. A graph's vertical axis is labeled from 0 to 100, but the data values only range from 80 to 90. This can make the differences in the data appear what?

A) Smaller than they actually are.

B) Larger than they actually are.

C) Inaccurate.

D) Unimportant.

Correct Answer: B

Explanation: When the scale of an axis is truncated or "zoomed in" on a small range, it exaggerates the visual differences between the data points, making them seem more significant.

## Mean, Median, Mode, and Range

Question 331. What is the range of the data set: 15, 28, 12, 45, 22, 19?

- A) 12
- B) 30
- C) 33
- D) 45

Correct Answer: C

Explanation: The range is the difference between the highest value (45) and the lowest value (12).  
 $45 - 12 = 33$ .

Question 332. A basketball player's scores in five games were 22, 25, 18, 22, and 33. What is the player's mean score?

- A) 22
- B) 24
- C) 25
- D) 33

Correct Answer: B

Explanation: Sum of scores =  $22 + 25 + 18 + 22 + 33 = 120$ . Number of games = 5. Mean =  $120 / 5 = 24$ .

Question 333. What is the mode of the data set: apple, banana, orange, apple, grape, banana, apple?

- A) Apple
- B) Banana
- C) Orange
- D) Grape

Correct Answer: A

Explanation: The mode is the item that appears most frequently. 'Apple' appears 3 times, more than any other fruit.

Question 334. Find the median of the temperatures: 56, 62, 54, 68, 62, 70.

- A) 62
- B) 64
- C) 65
- D) 68

Correct Answer: A

Explanation: First, order the data: 54, 56, 62, 62, 68, 70. The two middle numbers are 62 and 62. The average of 62 and 62 is  $(62+62)/2 = 62$ .

Question 335. If a data set has an outlier that is much higher than the other values, how will it affect the mean and median?

- A) It will increase the mean more than the median.
- B) It will increase the median more than the mean.
- C) It will increase both the mean and median equally.
- D) It will not affect either the mean or the median.

Correct Answer: A

Explanation: The mean is sensitive to outliers because it includes the value of every data point in its calculation. The median is resistant to outliers because it only depends on the position of the middle value. A high outlier will pull the mean up significantly but will have little to no effect on the median.

### Simple Probability Concepts

Question 336. A spinner is divided into 8 equal sections, numbered 1 through 8. What is the probability of spinning an even number?

- A) 1/8
- B) 1/4
- C) 3/8
- D) 1/2

Correct Answer: D

Explanation: There are four even numbers (2, 4, 6, 8) out of eight possible outcomes. The probability is  $4/8$ , which simplifies to  $1/2$ .

Question 337. A letter is chosen at random from the word 'PROBABILITY'. What is the probability of choosing the letter 'B'?

- A)  $1/11$
- B)  $2/11$
- C)  $1/10$
- D)  $2/9$

Correct Answer: B

Explanation: The word 'PROBABILITY' has 11 letters in total. The letter 'B' appears 2 times. So, the probability is  $2/11$ .

Question 338. You flip a coin and roll a standard six-sided die. What is the probability of getting tails and a 5?

- A)  $1/12$
- B)  $1/8$
- C)  $1/6$
- D)  $2/3$

Correct Answer: A

Explanation: These are independent events. The probability of getting tails is  $1/2$ . The probability of rolling a 5 is  $1/6$ . To find the probability of both happening, multiply their individual probabilities:  $(1/2)(1/6) = 1/12$ .

Question 339. A drawer contains 6 black socks, 4 white socks, and 2 blue socks. If you pull out one sock at random, what is the probability that it is NOT white?

- A)  $1/3$
- B)  $1/2$
- C)  $2/3$

D) 3/4

Correct Answer: C

Explanation: There are a total of  $6 + 4 + 2 = 12$  socks. The number of socks that are not white is 6 (black) + 2 (blue) = 8. The probability is  $8/12$ , which simplifies to  $2/3$ .

Question 340. If the probability of rain tomorrow is 0.3, what is the probability that it will not rain?

A) 0.3

B) 0.5

C) 0.7

D) 1.0

Correct Answer: C

Explanation: The sum of the probabilities of an event happening and not happening is always 1. So, the probability of no rain is  $1 - 0.3 = 0.7$ .

Practice Review: Mathematics

Question 341. A rectangular prism has a volume of 120 cubic inches. Its length is 8 inches and its width is 5 inches. What is its height?

A) 3 inches

B) 4 inches

C) 5 inches

D) 6 inches

Correct Answer: A

Explanation: Volume = length  $\times$  width  $\times$  height.  $120 = 8 \times 5 \times h$ .  $120 = 40h$ . Divide by 40:  $h = 120 / 40 = 3$  inches.

Question 342. Solve the inequality:  $3x + 5 > 20$

A)  $x > 5$

- B)  $x < 5$
- C)  $x > 8.33$
- D)  $x < 8.33$

Correct Answer: A

Explanation: Subtract 5 from both sides:  $3x > 15$ . Divide by 3:  $x > 5$ .

Question 343. A data set is: 10, 12, 15, 15, 18, 22. Which statement is true?

- A) The mean is equal to the mode.
- B) The median is equal to the mode.
- C) The mean is 15.
- D) The median is 15.

Correct Answer: D

Explanation: The mode is 15. The median is the average of the two middle numbers (15 and 15), which is 15. The mean is  $(10+12+15+15+18+22)/6 = 92/6 \approx 15.33$ . Therefore, the median is equal to the mode, and the median is 15.

Question 344. A model airplane is built with a scale of 1:48. If the wingspan of the model is 2 feet, what is the wingspan of the actual airplane?

- A) 24 feet
- B) 48 feet
- C) 96 feet
- D) 100 feet

Correct Answer: C

Explanation: The scale means the actual plane is 48 times larger than the model. Wingspan = 2 feet  $\times 48 = 96$  feet.

Question 345. What is the next number in the sequence: 2, 5, 11, 23, 47, \_\_\_?

- A) 94

B) 95

C) 71

D) 69

Correct Answer: B

Explanation: The pattern is to multiply by 2 and then add 1.  $22+1=5$ .  $52+1=11$ .  $112+1=23$ .  $232+1=47$ . The next number is  $472+1 = 94+1 = 95$ .

### Part III — Ability

#### Verbal Reasoning

Question 346. Which word does not belong with the others?

A) Jupiter

B) Mars

C) Sun

D) Venus

Correct Answer: C

Explanation: Jupiter, Mars, and Venus are all planets. The Sun is a star.

Question 347. Chapter is to Book as Room is to \_\_\_\_.

A) Door

B) House

C) Floor

D) Window

Correct Answer: B

Explanation: This is a part-to-whole analogy. A chapter is a part of a book. A room is a part of a house.

Question 348. Choose the word that is most nearly the opposite of 'transparent.'

- A) Clear
- B) Opaque
- C) Shiny
- D) Fragile

Correct Answer: B

Explanation: Transparent means allowing light to pass through so that objects behind can be distinctly seen. Opaque means not able to be seen through; not transparent.

Question 349. Which word best completes the sentence: A flock is a group of sheep, and a \_\_\_ is a group of fish.

- A) Herd
- B) Pack
- C) School
- D) Colony

Correct Answer: C

Explanation: This analogy uses collective nouns. The collective noun for a group of sheep is a flock, and the collective noun for a group of fish is a school.

Question 350. Find the two words, one from each group, that are opposites.

(Group 1: Ascend, Arrive, Ask)

(Group 2: Answer, Depart, Descend)

- A) Ascend and Descend
- B) Arrive and Answer
- C) Ask and Depart

D) Ascend and Depart

Correct Answer: A

Explanation: Ascend means to go up or climb. Descend means to move or fall downward. They are direct opposites.

### Analogy and Word Relationships

Question 351. Gills are to Fish as Lungs are to \_\_\_\_.

- A) Bird
- B) Mammal
- C) Water
- D) Air

Correct Answer: B

Explanation: This is an organism-to-respiratory-organ analogy. Fish use gills to breathe. Mammals (including humans) use lungs to breathe.

Question 352. Thermometer is to Temperature as Clock is to \_\_\_\_.

- A) Watch
- B) Time
- C) Hour
- D) Minute

Correct Answer: B

Explanation: This is an instrument-to-what-it-measures analogy. A thermometer measures temperature. A clock measures time.

Question 353. Timid is to Brave as Humble is to \_\_\_\_.

- A) Shy
- B) Modest

C) Arrogant

D) Quiet

Correct Answer: C

Explanation: This is an antonym analogy. Timid is the opposite of brave. Humble is the opposite of arrogant.

Question 354. Author is to Write as Chef is to \_\_\_\_.

A) Eat

B) Restaurant

C) Food

D) Cook

Correct Answer: D

Explanation: This is a worker-to-primary-action analogy. An author's job is to write. A chef's job is to cook.

Question 355. Spider is to Web as Bee is to \_\_\_\_.

A) Honey

B) Hive

C) Flower

D) Sting

Correct Answer: B

Explanation: This analogy relates an animal to the structure it builds or lives in. A spider builds a web. A bee lives in a hive.

### Synonyms, Antonyms, and Classifications

Question 356. Which word is a synonym for 'compel'?

A) To suggest

B) To allow

C) To force

D) To ignore

Correct Answer: C

Explanation: To compel someone to do something means to force or oblige them to do it.

Question 357. Which word is an antonym for 'flexible'?

A) Rigid

B) Elastic

C) Strong

D) Soft

Correct Answer: A

Explanation: Flexible means capable of bending easily without breaking. Rigid means unable to bend or be forced out of shape; not flexible.

Question 358. Which item does not belong in the group?

A) Inch

B) Mile

C) Ounce

D) Centimeter

Correct Answer: C

Explanation: Inch, Mile, and Centimeter are all units of length or distance. An ounce is a unit of weight.

Question 359. 'Trivial' is most nearly the opposite of \_\_\_\_.

A) Small

B) Unimportant

C) Difficult

D) Significant

Correct Answer: D

Explanation: Trivial means of little value or importance. Significant means sufficiently great or important to be worthy of attention.

Question 360. Which word belongs in the same category as 'Violin' and 'Cello'?

A) Flute

B) Drum

C) Viola

D) Piano

Correct Answer: C

Explanation: Violin, Cello, and Viola are all string instruments that are part of the violin family and are typically played with a bow.

### Quantitative Reasoning

Question 361. Look at this series: 4, 9, 16, 25, 36, ... What number should come next?

A) 49

B) 45

C) 64

D) 40

Correct Answer: A

Explanation: The series consists of consecutive perfect squares, starting with  $2^2$ . ( $2^2=4$ ,  $3^2=9$ ,  $4^2=16$ ,  $5^2=25$ ,  $6^2=36$ ). The next number is  $7^2$ , which is 49.

Question 362. Look at this series: 8, 6, 9, 7, 10, 8, 11, ... What number should come next?

A) 8

B) 9

C) 12

D) 13

Correct Answer: B

Explanation: This is an alternating series. The pattern is to subtract 2, then add 3, and repeat.  $8 - 2 = 6$ ,  $6 + 3 = 9$ ,  $9 - 2 = 7$ ,  $7 + 3 = 10$ ,  $10 - 2 = 8$ ,  $8 + 3 = 11$ . The next step is to subtract 2:  $11 - 2 = 9$ .

Question 363. Which fraction is the smallest:  $1/2$ ,  $3/8$ ,  $2/5$ ?

A)  $1/2$

B)  $3/8$

C)  $2/5$

D) They are all equal

Correct Answer: B

Explanation: To compare, convert the fractions to decimals.  $1/2 = 0.5$ .  $3/8 = 0.375$ .  $2/5 = 0.4$ . The smallest decimal is 0.375, which corresponds to  $3/8$ .

Question 364. If  $x$  is an even number and  $y$  is an odd number, which of the following must be an odd number?

A)  $x + y$

B)  $xy$

C)  $x + x$

D)  $y + y$

Correct Answer: A

Explanation: The sum of an even number and an odd number is always odd (e.g.,  $2 + 3 = 5$ ). The product of an even and an odd is even ( $2 \cdot 3 = 6$ ). The sum of two evens is even ( $2 + 2 = 4$ ). The sum of two odds is even ( $3 + 3 = 6$ ).

Question 365. A train travels at 60 miles per hour. A car travels at 60 kilometers per hour. Which is traveling faster? (1 mile  $\approx$  1.6 kilometers)

A) The train

- B) The car
- C) They are traveling at the same speed
- D) Cannot be determined

Correct Answer: A

Explanation: To compare, convert one speed. The train's speed is 60 mph. The car's speed is 60 kph. Since 1 mile is about 1.6 km, the train is traveling significantly faster than the car. 60 mph is approximately  $60 \times 1.6 = 96$  kph.

### Number Series and Pattern Recognition

Question 366. Look at this series: 2, 3, 5, 7, 11, 13, ... What number should come next?

- A) 15
- B) 16
- C) 17
- D) 19

Correct Answer: C

Explanation: This is a series of prime numbers, which are numbers divisible only by 1 and themselves. The next prime number after 13 is 17.

Question 367. Look at this series: 21, 20, 18, 15, 11, 6, ... What number should come next?

- A) 5
- B) 4
- C) 2
- D) 0

Correct Answer: D

Explanation: The pattern is to subtract a consecutively increasing number: -1, -2, -3, -4, -5. The next step is to subtract 6.  $6 - 6 = 0$ .

Question 368. Look at this series: Z, X, V, T, R, ... What letter should come next?

- A) P
- B) Q
- C) S
- D) O

Correct Answer: A

Explanation: The series consists of letters of the alphabet in reverse order, skipping one letter each time. After R, Q is skipped, so the next letter is P.

Question 369. Look at this series: 4, 12, 36, 108, ... What number should come next?

- A) 144
- B) 216
- C) 324
- D) 432

Correct Answer: C

Explanation: This is a geometric series where each number is multiplied by 3.  $108 \times 3 = 324$ .

Question 370. Look at this series: 1, 8, 27, 64, 125, ... What number should come next?

- A) 150
- B) 196
- C) 216
- D) 250

Correct Answer: C

Explanation: The series consists of perfect cubes.  $1^3=1$ ,  $2^3=8$ ,  $3^3=27$ ,  $4^3=64$ ,  $5^3=125$ . The next number is  $6^3$ , which is 216.

Question 371. Compare Quantity A and Quantity B.

Quantity A:  $\frac{1}{3}$  of 90

Quantity B:  $\frac{1}{4}$  of 120

A) Quantity A is greater.

B) Quantity B is greater.

C) The two quantities are equal.

D) The relationship cannot be determined.

Correct Answer: C

Explanation: Quantity A:  $(\frac{1}{3})90 = 30$ . Quantity B:  $(\frac{1}{4})120 = 30$ . The two quantities are equal.

Question 372. Estimate the sum of  $198 + 403 + 299$ .

A) 700

B) 800

C) 900

D) 1000

Correct Answer: C

Explanation: Round each number to the nearest hundred for a quick estimate. 198 rounds to 200, 403 rounds to 400, and 299 rounds to 300. The estimated sum is  $200 + 400 + 300 = 900$ .

Question 373. Compare Quantity A and Quantity B, given that  $0 < x < 1$ .

Quantity A:  $x$

Quantity B:  $x^2$

A) Quantity A is greater.

B) Quantity B is greater.

C) The two quantities are equal.

D) The relationship cannot be determined.

Correct Answer: A

Explanation: When a number between 0 and 1 is squared, the result is smaller than the original number. For example, if  $x = 0.5$ , then  $x^2 = 0.25$ . Therefore, Quantity A is greater.

Question 374. Which is the best estimate for 48% of 200?

- A) 50
- B) 100
- C) 150
- D) 200

Correct Answer: B

Explanation: 48% is very close to 50%, which is one-half. One-half of 200 is 100. This is a very close estimate.

Question 375. Compare Quantity A and Quantity B.

Quantity A: The circumference of a circle with a radius of 4.

Quantity B: The area of a circle with a radius of 4.

- A) Quantity A is greater.
- B) Quantity B is greater.
- C) The two quantities are equal.
- D) The relationship cannot be determined.

Correct Answer: B

Explanation: Quantity A: Circumference =  $2\pi r = 2\pi(4) = 8\pi$ . Quantity B: Area =  $\pi r^2 = \pi(4)^2 = 16\pi$ . Since  $16\pi$  is greater than  $8\pi$ , Quantity B is greater.

Abstract/Nonverbal Reasoning

Question 376. A sequence of figures shows a triangle, then a square, then a pentagon. What is the next figure in the sequence?

- A) A circle

- B) A hexagon
- C) A triangle
- D) An octagon

Correct Answer: B

Explanation: The pattern is a sequence of polygons, with the number of sides increasing by one at each step (3 sides, 4 sides, 5 sides). The next figure should have 6 sides, which is a hexagon.

Question 377. A 2x2 grid contains four shapes. The top-left is a shaded circle. The top-right is an unshaded circle. The bottom-left is a shaded square. What is the bottom-right figure?

- A) A shaded circle
- B) An unshaded circle
- C) A shaded square
- D) An unshaded square

Correct Answer: D

Explanation: The pattern in the rows is that the shape remains the same, but the shading is removed. The pattern in the columns is that the shading remains the same, but the shape changes. Following the row pattern, a shaded square should be followed by an unshaded square.

Question 378. A figure of a capital letter 'F' is reflected across a vertical line. What does the reflected figure look like?

- A) An upside-down 'F'
- B) A backward 'F'
- C) The letter 'F'
- D) The letter 'T'

Correct Answer: B

Explanation: Reflecting a figure across a vertical line creates a mirror image. The letter 'F' would appear backward.

Question 379. A pattern shows a large square with a small circle inside. The next figure shows a large circle with a small square inside. The next figure shows a large triangle with a small star inside. What is the next figure?

- A) A large square with a small triangle inside.
- B) A large star with a small triangle inside.
- C) A large circle with a small star inside.
- D) A large triangle with a small circle inside.

Correct Answer: B

Explanation: The pattern is that the small inner shape of one figure becomes the large outer shape of the next figure. The inner shape of the third figure is a star, so the outer shape of the fourth figure must be a star. The inner shape is the outer shape of the previous figure (triangle). So, it's a large star with a small triangle inside.

Question 380. A sequence shows a clock face. The first figure shows the time 3:00. The second shows 3:30. The third shows 4:00. What time does the fourth figure show?

- A) 4:15
- B) 4:30
- C) 5:00
- D) 5:30

Correct Answer: B

Explanation: The time is advancing by 30 minutes at each step. After 4:00, the next 30-minute increment is 4:30.

Practice Review: Ability

Question 381. Island is to Ocean as Oasis is to \_\_\_\_.

- A) Water
- B) Mirage
- C) Sand

D) Desert

Correct Answer: D

Explanation: This analogy relates a small area of refuge to the large, surrounding, often inhospitable environment. An island is a piece of land in an ocean. An oasis is a fertile spot in a desert.

Question 382. Look at this series: 81, 72, 63, 54, 45, ... What number should come next?

- A) 36
- B) 35
- C) 32
- D) 30

Correct Answer: A

Explanation: This is an arithmetic series where 9 is subtracted from each number to get the next.  
 $45 - 9 = 36$ .

Question 383. Which word does not belong with the others?

- A) Novel
- B) Poem
- C) Sculpture
- D) Short Story

Correct Answer: C

Explanation: Novel, Poem, and Short Story are all forms of literature. A sculpture is a form of visual art.

Question 384. Compare Quantity A and Quantity B.

Quantity A: The number of minutes in 2 hours.

Quantity B: The number of seconds in 2 minutes.

- A) Quantity A is greater.

- B) Quantity B is greater.
- C) The two quantities are equal.
- D) The relationship cannot be determined.

Correct Answer: C

Explanation: Quantity A: 2 hours  $\times$  60 minutes/hour = 120 minutes. Quantity B: 2 minutes  $\times$  60 seconds/minute = 120 seconds. The two quantities are equal in number, though the units are different. The question asks to compare the numbers.

Question 385. A figure matrix shows a pattern. The top row has a circle, a circle with a dot, and a circle with two dots. The second row has a square, a square with a dot, and a square with two dots. The third row has a triangle, and a triangle with a dot. What is the final figure?

- A) A square with two dots.
- B) A triangle with a circle.
- C) A triangle with two dots.
- D) A circle with a triangle.

Correct Answer: C

Explanation: The pattern in each row is that the shape stays the same, and one dot is added at each step. The third row starts with a triangle, then a triangle with one dot, so the final figure must be a triangle with two dots.

## Part IV — Strategies and Test Readiness

### Effective Pacing and Time Management

Question 386. On a test, you realize you are spending too much time on the first few questions. What should you do?

- A) Continue at the same pace to ensure accuracy.

B) Acknowledge it, speed up slightly on the next few questions you are confident about, and plan to come back if needed.

C) Skip the next 10 questions to catch up.

D) Give up on the section.

Correct Answer: B

Explanation: The key is to adjust. Don't panic or make rash decisions like skipping large sections. Make a conscious effort to move a little faster, especially on easier questions, to get back on pace.

Question 387. Why is it a good idea to wear a watch (if allowed) to a standardized test?

A) To look professional.

B) To have a backup in case the official clock is hard to see or not present.

C) To check the date.

D) To time each question precisely to the second.

Correct Answer: B

Explanation: Relying on an official clock can be risky. It might be broken, poorly placed, or simply not there. Having your own simple watch helps you take control of your own time management.

Question 388. What is the "two-pass" approach to taking a test section?

A) Answering all even questions first, then all odd questions.

B) Reading the entire section twice before answering any questions.

C) Going through the section once to answer all the easy questions, then making a second pass to work on the harder ones.

D) Checking your answers twice after you finish.

Correct Answer: C

Explanation: The two-pass method is an efficient strategy. On the first pass, you answer all the questions you know immediately, building momentum and banking points. On the second pass, you use the remaining time to tackle the more difficult, time-consuming questions you marked.

Question 389. On a multiple-choice question with four options, if you can confidently eliminate two choices, what is your probability of guessing the correct answer?

- A) 25%
- B) 33%
- C) 50%
- D) 75%

Correct Answer: C

Explanation: If you start with four choices, your odds are 1 in 4 (25%). By eliminating two incorrect choices, you are left with two options. Your odds of guessing correctly between the two remaining choices are 1 in 2 (50%).

Question 390. When is it a bad idea to change your initial answer on a multiple-choice test?

- A) When you have a clear, logical reason to believe your first answer was wrong.
- B) When you are just second-guessing yourself out of anxiety.
- C) When you find new evidence in the passage that contradicts your first choice.
- D) When you realize you misread the question initially.

Correct Answer: B

Explanation: Studies show that students often change correct answers to incorrect ones due to anxiety or a lack of confidence. You should only change an answer if you can identify a specific error in your original reasoning or have found new information that points to a better choice.

Question 391. If you have absolutely no idea how to answer a question and cannot eliminate any choices, what is the recommended strategy on the TACHS (which has no penalty for wrong answers)?

- A) Leave it blank.
- B) Make a random guess.
- C) Spend ten minutes trying to figure it out.
- D) Ask the proctor for a hint.

Correct Answer: B

Explanation: Since there is no penalty for guessing on the TACHS, you should never leave an answer blank. A random guess gives you a 25% chance of being right, whereas leaving it blank gives you a 0% chance.

### Recognizing Common Trap Choices

Question 392. In a vocabulary question, a common trap is an answer choice that \_\_\_\_.

- A) is spelled similarly to the correct answer
- B) uses the word in a different context
- C) is a known synonym of a different word in the sentence
- D) All of the above

Correct Answer: D

Explanation: Test makers use a variety of traps. A word that looks or sounds like the correct one, a word that is related to the topic but doesn't fit the specific context, or a word that is a synonym for another word in the sentence are all common ways to create tempting but incorrect answer choices.

Question 393. In a math word problem, a trap answer choice might be what?

- A) The correct answer, but in the wrong units (e.g., inches instead of feet).
- B) A number that was part of the question itself.
- C) The result of performing the wrong operation (e.g., adding instead of subtracting).
- D) All of the above.

Correct Answer: D

Explanation: Math traps are numerous. Always double-check that your answer has the correct units, isn't just a number you were given in the problem, and that you performed the correct operations as required by the question.

Question 394. In a reading passage about Abraham Lincoln, a question asks about his presidency. A trap answer might discuss what?

- A) His actions as president.
- B) His childhood and early life.
- C) The effects of his policies.
- D) The historical context of his presidency.

Correct Answer: B

Explanation: This is an example of an irrelevant detail trap. While the information about his childhood might be true and mentioned in the passage, it does not answer a question specifically about his presidency.

#### Section-by-Section Strategy Tips

Question 395. For the grammar and usage (Written Expression) section, what is an effective strategy?

- A) Choose the answer that sounds the most sophisticated.
- B) Read each sentence aloud (or in your head) to hear if it sounds natural and correct.
- C) Assume there are no errors in most questions.
- D) Always pick the shortest answer.

Correct Answer: B

Explanation: Your ear is often a good guide for grammar. If a sentence sounds awkward or clunky when you read it, there is a high probability that it contains a grammatical error. This can help you spot issues with flow, agreement, and structure.

Question 396. In the Ability section with nonverbal patterns, what is a good first step?

- A) Look at the figure as a whole to get a general impression.
- B) Identify one element in the first box and track only that element across the sequence.
- C) Stare at the last box to guess what comes next.
- D) Try to find the most complex part of the pattern first.

Correct Answer: B

Explanation: Abstract reasoning puzzles often have multiple elements changing at once. The easiest way to solve them is to isolate one component (e.g., the shaded square, the arrow, the number of dots) and figure out its individual pattern first. Then, move on to the next component.

Question 397. For any section of the test, what should you do immediately after finishing?

- A) Close your test booklet and relax.
- B) Use any remaining time to go back and review questions you marked as difficult or were unsure about.
- C) Try to start the next section early.
- D) Erase and re-bubble all of your answers to make them neater.

Correct Answer: B

Explanation: Time is a valuable resource. If you finish a section early, use that time wisely to check your work. Prioritize the questions you were most uncertain about to maximize your chances of catching errors.

### Mental Preparation and Test Confidence

Question 398. The night before the test, what is the best course of action?

- A) Stay up all night cramming new material.
- B) Go out with friends to relax and take your mind off the test.
- C) Do a light review of key concepts, then get a full night of sleep.
- D) Take a full-length practice test to see if you are ready.

Correct Answer: C

Explanation: Heavy cramming the night before is often counterproductive and can lead to burnout and anxiety. A light review followed by adequate sleep is the best way to ensure your brain is rested and ready to perform at its best.

Question 399. What is a good breakfast on the morning of the test?

- A) A large, heavy meal that will keep you full for hours.

- B) A sugary donut and soda for a quick energy boost.
- C) Nothing, to avoid feeling sluggish.
- D) A balanced meal with protein and complex carbohydrates for sustained energy.

Correct Answer: D

Explanation: Your brain needs fuel to function. A balanced breakfast with items like eggs, whole-wheat toast, or oatmeal provides steady energy, unlike a sugary breakfast which can lead to an energy crash.

Question 400. During the test, you start to feel overwhelmed and anxious. What is a quick, effective technique to regain focus?

- A) Think about how much you still have to do.
- B) Close your eyes for a moment, take a few slow, deep breaths, and then refocus on the single question in front of you.
- C) Rush through the next few questions to get past the feeling.
- D) Look around to see how everyone else is doing.

Correct Answer: B

Explanation: This is a simple mindfulness technique. Taking a brief moment to pause and regulate your breathing can calm your nervous system, clear your mind, and allow you to return to the test with renewed focus, breaking the cycle of anxiety.

## Part 1: Reading & Written Expression

(Questions 401-470)

Question 401:

Read the following sentence: "The ancient manuscript, with its delicate, yellowed pages and intricate calligraphy, was a testament to the scribe's artistry." What is the meaning of the word "intricate" in this context?

- A) Simple
- B) Colorful
- C) Complex and detailed
- D) Modern

Answer: C) Complex and detailed

Explanation: The context of "delicate, yellowed pages" and "calligraphy" suggests that the manuscript is a work of detailed craftsmanship. "Intricate" means having many complexly interrelated parts or details, which fits the description of the scribe's artistry.

Question 402:

Which of the following sentences is grammatically correct?

- A) The team of players are celebrating their victory.
- B) Each of the students have their own textbook.
- C) The flock of birds flies south for the winter.
- D) The committee, despite their disagreements, has reached a decision.

Answer: C) The flock of birds flies south for the winter.

Explanation: The subject of the sentence is "flock," which is a singular noun, even though it represents a group of birds. Therefore, the singular verb "flies" is correct. In option A, "team" is singular, so the verb should be "is." In option B, "Each" is singular, so the verb should be "has." In option D, "committee" is singular, so the pronoun should be "its" instead of "their."

Question 403:

Read the passage: "The city's new recycling program was met with initial skepticism. Many residents were unsure if the extra effort would make a difference. However, after just six months, the amount of waste sent to landfills had decreased by twenty percent. The local newspaper published a front-page story praising the community's efforts, and soon, even the most doubtful citizens were participating enthusiastically." What is the main idea of this passage?

- A) Recycling is a difficult and time-consuming process.
- B) The local newspaper is a powerful tool for community engagement.
- C) A new recycling program, despite initial doubts, proved to be highly successful.
- D) Landfills are a major environmental problem in modern cities.

Answer: C) A new recycling program, despite initial doubts, proved to be highly successful.

Explanation: The passage traces the journey of the recycling program from "initial skepticism" to a "twenty percent" decrease in landfill waste and enthusiastic participation. This progression clearly supports the main idea that the program was a success despite early hesitation.

Question 404:

Identify the correct use of the apostrophe in the following sentence.

- A) The childrens' toys were scattered all over the floor.
- B) The dog wagged it's tail excitedly.
- C) Its a beautiful day for a picnic.
- D) The students' projects were displayed in the hallway.

Answer: D) The students' projects were displayed in the hallway.

Explanation: "Students'" is the correct possessive form for the plural noun "students." In option A, the plural of "child" is "children," so the possessive form is "children's." In option B, "its" is the possessive pronoun, while "it's" is a contraction for "it is." In option C, the correct form is "It's," the contraction for "it is."

Question 405:

"The politician's speech was filled with eloquent phrases and powerful rhetoric, but it lacked substantive policy proposals." What does the word "substantive" mean in this sentence?

- A) Having a firm basis in reality and being important, meaningful, or considerable.
- B) Abstract and theoretical.
- C) Repetitive and unoriginal.
- D) Emotional and persuasive.

Answer: A) Having a firm basis in reality and being important, meaningful, or considerable.

Explanation: The sentence contrasts the "eloquent phrases" with the lack of "substantive" proposals, implying that the speech was all style and no real content. "Substantive" refers to something that is solid, meaningful, and has real-world importance.

Question 406:

Which word is a synonym for "ubiquitous"?

- A) Rare
- B) Scarce
- C) Pervasive
- D) Hidden

Answer: C) Pervasive

Explanation: "Ubiquitous" means present, appearing, or found everywhere. "Pervasive" also means spreading widely throughout an area or a group of people. The other options are antonyms.

Question 407:

Identify the figure of speech in the following sentence: "The wind whispered through the trees."

- A) Metaphor
- B) Simile

C) Personification

D) Hyperbole

Answer: C) Personification

Explanation: Personification is a figure of speech in which human qualities or abilities are given to inanimate objects or abstract ideas. In this sentence, the wind is given the human ability to "whisper."

Question 408:

Choose the sentence with the correct punctuation.

- A) She went to the store to buy milk, eggs and bread.
- B) She went to the store to buy milk, eggs, and bread.
- C) She went to the store, to buy milk eggs and bread.
- D) She went to the store to buy, milk, eggs, and bread.

Answer: B) She went to the store to buy milk, eggs, and bread.

Explanation: This sentence correctly uses the Oxford (or serial) comma before the conjunction "and" in a list of three or more items. This comma is standard in formal writing to prevent ambiguity.

Question 409:

What is the author's primary purpose in a text that provides step-by-step instructions on how to assemble a bookshelf?

- A) To persuade
- B) To inform
- C) To entertain
- D) To express feelings

Answer: B) To inform

Explanation: The primary purpose of instructional texts is to inform or explain how to do something. The goal is to convey information clearly and concisely.

Question 410:

In the sentence, "Despite the torrential rain, the team was determined to finish the game," what is the role of the word "Despite"?

- A) Noun
- B) Verb
- C) Adjective
- D) Preposition

Answer: D) Preposition

Explanation: "Despite" is a preposition that introduces a phrase ("the torrential rain") and shows its relationship to the main clause. It indicates contrast or opposition.

Question 411:

Which sentence demonstrates the correct use of "who" and "whom"?

- A) Whom did you invite to the party?
- B) Who did you give the book to?
- C) The person whom is in charge is not here.
- D) I don't know who to ask.

Answer: A) Whom did you invite to the party?

Explanation: "Whom" is the object of the verb "did invite." A simple trick is to rephrase the sentence: "You did invite whom?" If you can answer with "him" or "her," use "whom." In option B, it should be "To whom did you give the book?"

Question 412:

The word "benevolent" most nearly means:

- A) Cruel
- B) Well-meaning and kindly
- C) Wealthy
- D) Intelligent

Answer: B) Well-meaning and kindly

Explanation: "Benevolent" comes from the Latin roots "bene" (good) and "volens" (wishing). It describes someone who wishes good things for others, hence being kind and well-meaning.

Question 413:

What is the tone of a passage that uses words like "tragic," "heartbreaking," and "devastating"?

- A) Humorous
- B) Somber
- C) Optimistic
- D) Sarcastic

Answer: B) Somber

Explanation: These words evoke feelings of sadness, seriousness, and grief. A somber tone is one that is dark, gloomy, and serious.

Question 414:

Which of the following is a complex sentence?

- A) The cat slept on the mat.
- B) The cat slept on the mat, and the dog barked at the door.
- C) Because the cat was tired, it slept on the mat.
- D) The tired, fluffy cat slept soundly.

Answer: C) Because the cat was tired, it slept on the mat.

Explanation: A complex sentence contains one independent clause ("it slept on the mat") and at least one dependent clause ("Because the cat was tired"). The dependent clause begins with a subordinating conjunction ("Because").

Question 415:

"The detective's cursory examination of the crime scene missed the crucial clue." What does "cursory" mean?

- A) Thorough and detailed
- B) Hasty and not thorough
- C) Scientific
- D) Final

Answer: B) Hasty and not thorough

Explanation: A cursory examination is one that is done quickly and without attention to detail. The fact that the detective "missed the crucial clue" supports this meaning.

Question 416:

Which sentence is written in the active voice?

- A) The ball was thrown by the boy.
- B) The decision was made by the committee.
- C) The boy threw the ball.
- D) The cake was eaten by the guests.

Answer: C) The boy threw the ball.

Explanation: In the active voice, the subject of the sentence performs the action. Here, the "boy" (subject) is doing the "throwing" (action). The other sentences are in the passive voice, where the subject receives the action.

Question 417:

What can be inferred from the sentence: "Even though Maria had practiced for weeks, her hands trembled as she walked onto the stage."

- A) Maria was not prepared for her performance.
- B) Maria was excited to be on stage.
- C) Maria was nervous about performing.
- D) Maria did not want to be on stage.

Answer: C) Maria was nervous about performing.

Explanation: Trembling hands are a common physical sign of nervousness or anxiety. Despite her preparation, the act of performing in front of an audience made her nervous.

Question 418:

Choose the correct spelling.

- A) Acomodate
- B) Accommodate
- C) Acommodate
- D) Accomodate

Answer: B) Accommodate

Explanation: The correct spelling of the word is "accommodate," with two "c"s and two "m"s.

Question 419:

"The new CEO's plan to revitalize the company was audacious." The word "audacious" means:

- A) Cautious
- B) Secretive
- C) Bold and daring
- D) Unpopular

Answer: C) Bold and daring

Explanation: An audacious plan is one that is surprisingly bold, original, and takes risks. It implies a high level of confidence and ambition.

Question 420:

What is the main function of a topic sentence in a paragraph?

- A) To provide a concluding thought.
- B) To introduce the main idea of the paragraph.
- C) To give a supporting detail or example.
- D) To transition to the next paragraph.

Answer: B) To introduce the main idea of the paragraph.

Explanation: The topic sentence typically appears at the beginning of a paragraph and states the central point that the rest of the paragraph will develop and support.

Question 421:

Which sentence uses "affect" and "effect" correctly?

- A) The rain will have a negative affect on the picnic.
- B) The new law will effect many people.
- C) The loud music did not affect his concentration.
- D) What was the affect of the storm?

Answer: C) The loud music did not affect his concentration.

Explanation: "Affect" is usually a verb meaning "to influence or impact." "Effect" is usually a noun meaning "a result or consequence." In sentence C, "affect" is correctly used as a verb.

Question 422:

A story about a character who overcomes great personal challenges to achieve a goal is most likely intended to be:

- A) Satirical
- B) Inspirational
- C) Tragic
- D) Informative

Answer: B) Inspirational

Explanation: Stories of overcoming adversity are often meant to inspire readers, showing them that determination and resilience can lead to success.

Question 423:

"The old house stood on a hill, its windows like vacant eyes staring out over the valley." This sentence contains an example of a:

- A) Simile
- B) Metaphor
- C) Personification
- D) Alliteration

Answer: A) Simile

Explanation: A simile is a figure of speech that makes a comparison between two different things using the words "like" or "as." Here, the windows are compared to "vacant eyes" using the word "like."

Question 424:

Which of the following would be the most credible source for a research paper on climate change?

- A) A personal blog by an environmental enthusiast.
- B) A peer-reviewed scientific journal article.
- C) A fictional novel about a future environmental disaster.

D) An advertisement from an oil company.

Answer: B) A peer-reviewed scientific journal article.

Explanation: Peer-reviewed articles are written by experts and have been vetted by other experts in the same field, ensuring a high level of accuracy, credibility, and scholarly rigor.

Question 425:

The word "ephemeral" means:

- A) Lasting forever
- B) Lasting for a very short time
- C) Beautiful
- D) Complicated

Answer: B) Lasting for a very short time

Explanation: "Ephemeral" describes something that is fleeting or transitory, like the beauty of a cherry blossom or a mayfly's life.

Question 426:

Identify the error in the sentence: "Me and my friend went to the movies."

- A) Incorrect verb tense
- B) Incorrect pronoun case
- C) Missing comma
- D) Misspelled word

Answer: B) Incorrect pronoun case

Explanation: When a pronoun is part of the subject of a sentence, the subjective case should be used. "Me" is an objective pronoun. The correct sentence is "My friend and I went to the movies."

Question 427:

What is the purpose of a thesis statement in an essay?

- A) To summarize the entire essay in one sentence.
- B) To present the main argument or point of the essay.
- C) To ask a question that the essay will answer.
- D) To provide a list of topics that will be covered.

Answer: B) To present the main argument or point of the essay.

Explanation: A thesis statement is a concise declaration of the essay's central argument, which the rest of the essay will support with evidence and analysis.

Question 428:

"The student was diligent in his studies, always completing his homework on time and preparing thoroughly for exams." The word "diligent" means:

- A) Lazy
- B) Intelligent
- C) Careless
- D) Hardworking and conscientious

Answer: D) Hardworking and conscientious

Explanation: The context clues "always completing his homework on time" and "preparing thoroughly" indicate that the student is careful, persistent, and hardworking in his efforts.

Question 429:

Which sentence contains a dangling modifier?

- A) After finishing my homework, I watched television.
- B) Running for the bus, my backpack fell off.
- C) The dog, wagging its tail, greeted me at the door.

D) To get good grades, one must study hard.

Answer: B) Running for the bus, my backpack fell off.

Explanation: A dangling modifier is a phrase that doesn't logically modify any word in the sentence. In this case, it sounds like the backpack was running for the bus. The sentence should be rewritten, for example: "As I was running for the bus, my backpack fell off."

Question 430:

The opposite of "ambiguous" is:

- A) Vague
- B) Clear
- C) Confusing
- D) Difficult

Answer: B) Clear

Explanation: "Ambiguous" means open to more than one interpretation or having a double meaning. Something that is clear has only one meaning and is easy to understand.

Question 431:

What is the main difference between a fact and an opinion?

- A) A fact is a long statement, while an opinion is short.
- B) A fact can be proven true or false, while an opinion is a belief or judgment.
- C) A fact is always true, while an opinion is always false.
- D) A fact is what an expert says, while an opinion is what a non-expert says.

Answer: B) A fact can be proven true or false, while an opinion is a belief or judgment.

Explanation: Facts are objective and can be verified with evidence. Opinions are subjective and based on personal feelings, beliefs, or interpretations.

Question 432:

Choose the sentence that uses commas correctly to set off a non-essential clause.

- A) The student, who scored the highest on the test, will receive an award.
- B) The student who scored the highest on the test will receive an award.
- C) The student who scored the highest, on the test, will receive an award.
- D) The student, who scored the highest on the test will receive an award.

Answer: A) The student, who scored the highest on the test, will receive an award.

Explanation: If the clause "who scored the highest on the test" is removed, the sentence "The student will receive an award" still makes sense. This indicates the clause is non-essential and should be set off by commas. Option B would be correct if there were multiple students and the clause was needed to specify which one.

Question 433:

The word "gregarious" describes someone who is:

- A) Shy and introverted
- B) Fond of company; sociable
- C) Highly intelligent
- D) Overly critical

Answer: B) Fond of company; sociable

Explanation: A gregarious person enjoys being around other people and is outgoing and sociable.

Question 434:

In a narrative, what is the climax?

- A) The beginning of the story where characters are introduced.
- B) The series of events that build tension.

C) The turning point or most intense moment of the story.

D) The end of the story where conflicts are resolved.

Answer: C) The turning point or most intense moment of the story.

Explanation: The climax is the peak of the action and the central conflict, where the protagonist faces their main challenge and the outcome of the story is decided.

Question 435:

Which of the following is an example of a transition word indicating contrast?

A) Therefore

B) In addition

C) However

D) For example

Answer: C) However

Explanation: "However" is used to introduce a statement that contrasts with or seems to contradict something that has been said previously.

Question 436:

"The scientist's theory was plausible, but it still needed to be tested." The word "plausible" means:

A) Unbelievable

B) Proven

C) Seeming reasonable or probable

D) Complicated

Answer: C) Seeming reasonable or probable

Explanation: A plausible theory is one that appears to be true or could be true, but it lacks definitive proof. It is credible on the surface.

Question 437:

Identify the sentence with parallel structure.

- A) She likes to swim, hiking, and to ride her bike.
- B) She likes swimming, hiking, and riding her bike.
- C) She likes to swim, to go hiking, and riding her bike.
- D) She likes swimming, to hike, and to ride her bike.

Answer: B) She likes swimming, hiking, and riding her bike.

Explanation: Parallel structure means using the same pattern of words to show that two or more ideas have the same level of importance. In this sentence, all three activities are presented as gerunds (-ing words).

Question 438:

What is the meaning of the prefix "mal-" in words like "malfunction" or "malicious"?

- A) Good
- B) Bad or evil
- C) Before
- D) Against

Answer: B) Bad or evil

Explanation: The prefix "mal-" comes from Latin and means "bad," "wrongful," or "ill." A malfunction is a bad function; malicious means having bad intent.

Question 439:

A biography is a story of a person's life written by:

- A) The person themselves
- B) A historian

C) Another person

D) A novelist

Answer: C) Another person

Explanation: A biography is an account of someone's life written by someone else. A story of a person's life written by that person is an autobiography.

Question 440:

"The speaker's comments were superfluous and did not add anything to the discussion."

"Superfluous" means:

A) Necessary

B) Insightful

C) Unnecessary; more than enough

D) Controversial

Answer: C) Unnecessary; more than enough

Explanation: Superfluous means being more than is needed or required. The context clue "did not add anything to the discussion" reinforces this meaning.

Question 441:

Which sentence correctly uses a semicolon?

A) I have a big test tomorrow; I can't go out tonight.

B) I have a big test tomorrow; so I can't go out tonight.

C) I like pizza; but I don't like anchovies.

D) The ingredients are; flour, sugar, and eggs.

Answer: A) I have a big test tomorrow; I can't go out tonight.

Explanation: A semicolon can be used to connect two closely related independent clauses. Option A correctly joins two complete sentences that are thematically linked. In option B, the conjunction "so" makes the semicolon unnecessary.

Question 442:

The word "fortitude" means:

- A) Wealth
- B) Courage in pain or adversity
- C) Intelligence
- D) A type of fortress

Answer: B) Courage in pain or adversity

Explanation: Fortitude refers to mental and emotional strength in facing difficulty, adversity, danger, or temptation courageously.

Question 443:

What is foreshadowing in literature?

- A) A detailed description of a character.
- B) A hint or clue about what will happen later in the story.
- C) A flashback to an earlier event.
- D) The main message or moral of the story.

Answer: B) A hint or clue about what will happen later in the story.

Explanation: Foreshadowing is a literary device used by authors to give an advance hint of the events that will come later in the plot, creating suspense and anticipation.

Question 444:

"The teacher tried to placate the angry student." The word "placate" means:

- A) To make someone more angry
- B) To make someone less angry or hostile
- C) To ignore someone
- D) To punish someone

Answer: B) To make someone less angry or hostile

Explanation: To placate someone is to appease or pacify them, especially by making concessions. It is an attempt to calm them down.

Question 445:

Which of the following sentences contains a verb in the subjunctive mood?

- A) I was at the store yesterday.
- B) If I were you, I would study for the test.
- C) He is a talented musician.
- D) She will go to the concert.

Answer: B) If I were you, I would study for the test.

Explanation: The subjunctive mood is used for hypothetical or contrary-to-fact situations. The use of "were" instead of "was" with the subject "I" indicates the subjunctive mood.

Question 446:

The word "ostentatious" is best defined as:

- A) Quiet and reserved
- B) Characterized by vulgar or pretentious display; designed to impress or attract notice
- C) Practical and functional
- D) Old-fashioned

Answer: B) Characterized by vulgar or pretentious display; designed to impress or attract notice

Explanation: Ostentatious behavior or objects are meant to be showy and attract attention, often in a way that is considered tasteless.

Question 447:

What is the purpose of an index in a book?

- A) To list the chapters and their page numbers.
- B) To provide definitions of key terms.
- C) To list topics alphabetically and the pages where they can be found.
- D) To give credit to the sources used in the book.

Answer: C) To list topics alphabetically and the pages where they can be found.

Explanation: An index, located at the back of a book, is an alphabetical list of names, subjects, etc., with references to the pages on which they are mentioned, allowing for quick look-up.

Question 448:

"Her poignant speech about her childhood moved the entire audience to tears." The word "poignant" means:

- A) Humorous
- B) Evoking a keen sense of sadness or regret
- C) Long and boring
- D) Loud and angry

Answer: B) Evoking a keen sense of sadness or regret

Explanation: Something that is poignant touches the emotions deeply, often in a sad or touching way. The fact that the audience was moved to tears supports this meaning.

Question 449:

Which of the following is NOT a coordinating conjunction?

- A) For
- B) And
- C) Although
- D) But

Answer: C) Although

Explanation: The coordinating conjunctions can be remembered with the acronym FANBOYS: For, And, Nor, But, Or, Yet, So. "Although" is a subordinating conjunction, which introduces a dependent clause.

Question 450:

What is the theme of a story?

- A) The plot or sequence of events.
- B) The time and place where the story occurs.
- C) The underlying message or main idea of the story.
- D) The main character's personality.

Answer: C) The underlying message or main idea of the story.

Explanation: The theme is the central topic, subject, or message within a narrative. It is the broader idea or insight about life that the author wants to convey.

Question 451:

"The politician's equivocal answer left the reporters confused." The word "equivocal" means:

- A) Clear and direct
- B) Open to more than one interpretation; ambiguous
- C) Loud and confident
- D) False

Answer: B) Open to more than one interpretation; ambiguous

Explanation: An equivocal statement is deliberately vague or ambiguous, making it difficult to understand the true meaning. The reporters' confusion is a clue to this definition.

Question 452:

Identify the type of sentence: "Stop that!"

- A) Declarative
- B) Interrogative
- C) Imperative
- D) Exclamatory

Answer: C) Imperative

Explanation: An imperative sentence gives a command or makes a request. The subject is often an implied "you."

Question 453:

The root word "port" means to carry. Which word means a person who carries luggage?

- A) Reporter
- B) Porter
- C) Importer
- D) Transporter

Answer: B) Porter

Explanation: A porter is a person employed to carry luggage and other loads, especially in a railroad station, airport, or hotel.

Question 454:

"The team's morale was low after the devastating loss." The word "morale" refers to:

- A) The physical condition of the team.
- B) The team's strategy.
- C) The confidence, enthusiasm, and discipline of a person or group.
- D) The team's uniform.

Answer: C) The confidence, enthusiasm, and discipline of a person or group.

Explanation: Morale is the collective spirit or emotional state of a group. A loss would naturally lower their confidence and enthusiasm.

Question 455:

Which sentence has an error in subject-verb agreement?

- A) The dog barks loudly.
- B) The dogs bark loudly.
- C) The list of items are on the table.
- D) The key to the cabinets is missing.

Answer: C) The list of items are on the table.

Explanation: The subject of the sentence is "list," which is singular. Therefore, the verb should be singular: "is." The correct sentence is "The list of items is on the table."

Question 456:

The word "pragmatic" means:

- A) Dealing with things sensibly and realistically in a way that is based on practical rather than theoretical considerations.
- B) Idealistic and hopeful.
- C) Complicated and difficult to understand.
- D) Following strict rules.

Answer: A) Dealing with things sensibly and realistically in a way that is based on practical rather than theoretical considerations.

Explanation: A pragmatic person or approach focuses on what works in practice, not just what sounds good in theory.

Question 457:

What is an oxymoron?

- A) A long, narrative poem.
- B) An exaggerated statement not meant to be taken literally.
- C) A figure of speech in which apparently contradictory terms appear in conjunction.
- D) The repetition of a sound at the beginning of words.

Answer: C) A figure of speech in which apparently contradictory terms appear in conjunction.

Explanation: Examples of oxymorons include "jumbo shrimp," "deafening silence," and "living dead."

Question 458:

"He was exonerated after new evidence proved his innocence." The word "exonerated" means:

- A) Convicted
- B) Absolved from blame for a fault or wrongdoing
- C) Questioned
- D) Imprisoned

Answer: B) Absolved from blame for a fault or wrongdoing

Explanation: To exonerate someone is to officially clear them of blame or suspicion. The phrase "proved his innocence" is a direct clue.

Question 459:

Which of the following is a compound-complex sentence?

- A) I like tea, but he likes coffee.
- B) When the sun sets, the stars come out.
- C) Although I am tired, I will finish my homework, and then I will go to bed.
- D) The old library is a beautiful building.

Answer: C) Although I am tired, I will finish my homework, and then I will go to bed.

Explanation: A compound-complex sentence has at least two independent clauses ("I will finish my homework" and "then I will go to bed") and at least one dependent clause ("Although I am tired").

Question 460:

The word "lethargic" means:

- A) Energetic and active
- B) Sluggish and apathetic
- C) Happy and cheerful
- D) Angry and aggressive

Answer: B) Sluggish and apathetic

Explanation: Lethargy is a state of tiredness, weariness, fatigue, or lack of energy. It can be accompanied by depression, decreased motivation, or apathy.

Question 461:

What is the function of an adjective?

- A) To describe a verb, adjective, or other adverb.
- B) To describe a noun or pronoun.
- C) To show action or a state of being.
- D) To connect words, phrases, or clauses.

Answer: B) To describe a noun or pronoun.

Explanation: Adjectives are modifying words that provide more information about a noun or pronoun, such as its quality, size, or color (e.g., the "red" car).

Question 462:

"The novel's protagonist was a compelling and complex character." A "protagonist" is the:

- A) Main character in a story.
- B) Villain or character who opposes the main character.
- C) Narrator of the story.
- D) Author of the story.

Answer: A) Main character in a story.

Explanation: The protagonist is the central character or leading figure in poetry, narrative, novel, or any other story.

Question 463:

The word "resilient" describes something or someone that is:

- A) Fragile and easily broken.
- B) Able to withstand or recover quickly from difficult conditions.
- C) Rigid and unbending.
- D) Old and worn out.

Answer: B) Able to withstand or recover quickly from difficult conditions.

Explanation: Resilience is the capacity to recover quickly from difficulties; toughness.

Question 464:

Which sentence uses "their," "they're," and "there" correctly?

- A) They're going to put their coats over there.
- B) There going to put they're coats over their.
- C) Their going to put there coats over they're.
- D) They're going to put there coats over their.

Answer: A) They're going to put their coats over there.

Explanation: "They're" is a contraction for "they are." "Their" is a possessive pronoun. "There" indicates a place or location.

Question 465:

What is an allusion in literature?

- A) An exaggeration for effect.
- B) A direct comparison using "like" or "as."
- C) An indirect reference to a person, place, thing, or idea of historical, cultural, literary, or political significance.
- D) A statement that contradicts itself.

Answer: C) An indirect reference to a person, place, thing, or idea of historical, cultural, literary, or political significance.

Explanation: For example, saying "He was a real Romeo with the ladies" is an allusion to Shakespeare's character Romeo.

Question 466:

"The manager's tacit approval was all the team needed to proceed." The word "tacit" means:

- A) Loud and explicit
- B) Official and written
- C) Understood or implied without being stated
- D) Hesitant

Answer: C) Understood or implied without being stated

Explanation: Tacit approval is an unspoken agreement or consent that is inferred from actions or silence.

Question 467:

Which of the following is a complete sentence?

- A) Running through the park.
- B) Because it was raining.
- C) The girl with the red hat.
- D) The birds sang.

Answer: D) The birds sang.

Explanation: A complete sentence must have at least one subject ("The birds") and one predicate (verb) ("sang") and express a complete thought. The other options are sentence fragments.

Question 468:

The word "anomaly" means:

- A) Something that is normal or expected.
- B) A scientific theory.
- C) Something that deviates from what is standard, normal, or expected.
- D) A source of confusion.

Answer: C) Something that deviates from what is standard, normal, or expected.

Explanation: An anomaly is an outlier or an oddity that doesn't fit the common pattern.

Question 469:

What is the purpose of a bibliography?

- A) To provide a summary of the book.
- B) To list the sources the author consulted or cited.
- C) To define important terms used in the text.
- D) To provide an alphabetical list of topics.

Answer: B) To list the sources the author consulted or cited.

Explanation: A bibliography, usually found at the end of a work, lists the books, articles, and other sources used in the research and writing process.

Question 470:

"His speech was full of platitudes and offered no real solutions." A "platitude" is:

- A) A new and original idea.
- B) A remark or statement, especially one with a moral content, that has been used too often to be interesting or thoughtful.
- C) A factual error.
- D) A complex argument.

Answer: B) A remark or statement, especially one with a moral content, that has been used too often to be interesting or thoughtful.

Explanation: A platitude is a cliché or a trite saying, such as "everything happens for a reason." It's a statement that is obvious and unhelpful.

Part 2: Mathematics

(Questions 471-540)

Question 471:

A rectangular garden is 15 feet long and 9 feet wide. What is the perimeter of the garden?

- A) 24 feet
- B) 48 feet
- C) 135 square feet
- D) 60 feet

Answer: B) 48 feet

Explanation: The formula for the perimeter of a rectangle is  $P = 2(\text{length} + \text{width})$ . In this case,  $P = 2(15 + 9) = 2(24) = 48$  feet.

Question 472:

If a shirt that originally costs \$40 is on sale for 25% off, what is the sale price?

- A) \$10
- B) \$25
- C) \$30
- D) \$35

Answer: C) \$30

Explanation: First, calculate the discount amount: 25% of \$40 is  $0.25 \times 40 = \$10$ . Then, subtract the discount from the original price:  $\$40 - \$10 = \$30$ .

Question 473:

Solve for x:  $3x + 7 = 22$

- A) 3
- B) 5
- C) 7
- D) 9

Answer: B) 5

Explanation: To solve for  $x$ , first subtract 7 from both sides of the equation:  $3x = 22 - 7$ , which simplifies to  $3x = 15$ . Then, divide both sides by 3:  $x = 15 / 3$ , so  $x = 5$ .

Question 474:

What is the area of a circle with a radius of 5 inches? (Use  $\pi \approx 3.14$ )

- A) 15.7 square inches
- B) 31.4 square inches
- C) 78.5 square inches
- D) 25 square inches

Answer: C) 78.5 square inches

Explanation: The formula for the area of a circle is  $A = \pi r^2$ . In this case,  $A = 3.14(5^2) = 3.1425 = 78.5$  square inches.

Question 475:

A bag contains 4 red marbles, 6 blue marbles, and 5 green marbles. What is the probability of randomly selecting a blue marble?

- A) 1/3
- B) 2/5
- C) 1/2
- D) 6/15

Answer: B) 2/5

Explanation: The total number of marbles is  $4 + 6 + 5 = 15$ . The number of blue marbles is 6. The probability of selecting a blue marble is the number of blue marbles divided by the total number of marbles, which is  $6/15$ . This fraction can be simplified to  $2/5$ .

Question 476:

Simplify the expression:  $5(2x - 3) + 4x$

- A)  $14x - 15$
- B)  $10x - 15$
- C)  $6x - 8$
- D)  $14x - 3$

Answer: A)  $14x - 15$

Explanation: First, distribute the 5:  $52x = 10x$  and  $5-3 = -15$ . The expression becomes  $10x - 15 + 4x$ . Combine the like terms ( $10x$  and  $4x$ ) to get  $14x$ . The simplified expression is  $14x - 15$ .

Question 477:

If a car travels at an average speed of 60 miles per hour, how long will it take to travel 210 miles?

- A) 3 hours
- B) 3.5 hours
- C) 4 hours
- D) 4.5 hours

Answer: B) 3.5 hours

Explanation: Time = Distance / Speed. Time = 210 miles / 60 mph = 3.5 hours.

Question 478:

What is the value of  $2^5$ ?

- A) 10
- B) 16
- C) 25
- D) 32

Answer: D) 32

Explanation:  $2^5$  means 2 multiplied by itself 5 times:  $22222 = 32$ .

Question 479:

Find the mean (average) of the following numbers: 10, 15, 20, 25, 30.

- A) 15
- B) 20
- C) 25
- D) 100

Answer: B) 20

Explanation: To find the mean, add all the numbers together and divide by the count of the numbers.  $\text{Sum} = 10 + 15 + 20 + 25 + 30 = 100$ .  $\text{Count} = 5$ .  $\text{Mean} = 100 / 5 = 20$ .

Question 480:

A triangle has angles measuring  $40^\circ$  and  $60^\circ$ . What is the measure of the third angle?

- A)  $80^\circ$
- B)  $90^\circ$
- C)  $100^\circ$
- D)  $180^\circ$

Answer: A)  $80^\circ$

Explanation: The sum of the angles in any triangle is always  $180^\circ$ . To find the third angle, subtract the known angles from  $180^\circ$ :  $180^\circ - 40^\circ - 60^\circ = 80^\circ$ .

Question 481:

Convert the fraction  $3/4$  to a decimal.

- A) 0.25
- B) 0.50

C) 0.75

D) 3.4

Answer: C) 0.75

Explanation: To convert a fraction to a decimal, divide the numerator by the denominator:  $3 \div 4 = 0.75$ .

Question 482:

If  $x = -3$ , what is the value of the expression  $x^2 + 2x - 1$ ?

A) 2

B) -16

C) 4

D) -4

Answer: A) 2

Explanation: Substitute -3 for x:  $(-3)^2 + 2(-3) - 1$ . This becomes  $9 + (-6) - 1$ , which simplifies to  $9 - 6 - 1 = 2$ .

Question 483:

A recipe calls for 2 cups of flour to make 12 cookies. How many cups of flour are needed to make 30 cookies?

A) 3 cups

B) 4 cups

C) 5 cups

D) 6 cups

Answer: C) 5 cups

Explanation: Set up a proportion:  $(2 \text{ cups} / 12 \text{ cookies}) = (x \text{ cups} / 30 \text{ cookies})$ . Cross-multiply:  $12x = 230$ , so  $12x = 60$ . Divide by 12:  $x = 5$  cups.

Question 484:

What is the least common multiple (LCM) of 6 and 8?

- A) 12
- B) 16
- C) 24
- D) 48

Answer: C) 24

Explanation: The multiples of 6 are 6, 12, 18, 24, 30... The multiples of 8 are 8, 16, 24, 32... The smallest number that appears in both lists is 24.

Question 485:

A cube has a side length of 4 cm. What is its volume?

- A) 12  $\text{cm}^3$
- B) 16  $\text{cm}^3$
- C) 48  $\text{cm}^3$
- D) 64  $\text{cm}^3$

Answer: D) 64  $\text{cm}^3$

Explanation: The formula for the volume of a cube is  $V = \text{side}^3$ .  $V = 4^3 = 4 \cdot 4 \cdot 4 = 64 \text{ cm}^3$ .

Question 486:

Calculate:  $1/2 + 1/3$

- A) 1/5
- B) 2/5

C) 5/6

D) 1

Answer: C) 5/6

Explanation: To add fractions, you need a common denominator. The least common denominator for 2 and 3 is 6. Convert the fractions:  $1/2 = 3/6$  and  $1/3 = 2/6$ . Now add them:  $3/6 + 2/6 = 5/6$ .

Question 487:

A map has a scale of 1 inch = 20 miles. If two cities are 4.5 inches apart on the map, what is the actual distance between them?

A) 45 miles

B) 80 miles

C) 90 miles

D) 100 miles

Answer: C) 90 miles

Explanation: Multiply the map distance by the scale factor:  $4.5 \text{ inches} \times 20 \text{ miles/inch} = 90 \text{ miles}$ .

Question 488:

What is 15% of 200?

A) 15

B) 20

C) 30

D) 40

Answer: C) 30

Explanation: To find the percentage, convert the percent to a decimal and multiply:  $15\% = 0.15$ . So,  $0.15 \times 200 = 30$ .

Question 489:

The price of a jacket increased from \$50 to \$60. What was the percent increase?

- A) 10%
- B) 15%
- C) 20%
- D) 25%

Answer: C) 20%

Explanation: The amount of increase is  $\$60 - \$50 = \$10$ . The percent increase is  $(\text{Amount of Increase} / \text{Original Price})100$ . So,  $(\$10 / \$50)100 = 0.20100 = 20\%$ .

Question 490:

Solve the inequality:  $4x - 5 > 11$

- A)  $x > 4$
- B)  $x < 4$
- C)  $x > 1.5$
- D)  $x < 1.5$

Answer: A)  $x > 4$

Explanation: Add 5 to both sides:  $4x > 16$ . Then, divide both sides by 4:  $x > 4$ .

Question 491:

What is the greatest common factor (GCF) of 24 and 36?

- A) 6
- B) 8
- C) 12

D) 72

Answer: C) 12

Explanation: The factors of 24 are 1, 2, 3, 4, 6, 8, 12, 24. The factors of 36 are 1, 2, 3, 4, 6, 9, 12, 18, 36. The largest number that appears in both lists is 12.

Question 492:

A pizza is cut into 8 equal slices. If you eat 3 slices, what fraction of the pizza is left?

- A) 3/8
- B) 1/2
- C) 5/8
- D) 3/5

Answer: C) 5/8

Explanation: If there are 8 slices total and you eat 3, there are  $8 - 3 = 5$  slices remaining. The fraction left is 5/8.

Question 493:

The area of a square is 49 square inches. What is the length of one side?

- A) 7 inches
- B) 12.25 inches
- C) 24.5 inches
- D) 49 inches

Answer: A) 7 inches

Explanation: The area of a square is  $\text{side} \times \text{side}$  ( $s^2$ ). To find the side length, you need to find the square root of the area. The square root of 49 is 7.

Question 494:

Evaluate the expression:  $|-8| + |3|$

- A) -11
- B) -5
- C) 5
- D) 11

Answer: D) 11

Explanation: The absolute value of a number is its distance from zero, which is always positive.  $|-8| = 8$  and  $|3| = 3$ . So,  $8 + 3 = 11$ .

Question 495:

A train leaves the station at 9:15 AM and arrives at its destination at 1:45 PM. How long was the journey?

- A) 3 hours, 30 minutes
- B) 4 hours, 15 minutes
- C) 4 hours, 30 minutes
- D) 5 hours, 30 minutes

Answer: C) 4 hours, 30 minutes

Explanation: From 9:15 AM to 12:15 PM is 3 hours. From 12:15 PM to 1:15 PM is another hour (total 4 hours). From 1:15 PM to 1:45 PM is 30 minutes. The total journey time is 4 hours and 30 minutes.

Question 496:

Which of these numbers is a prime number?

- A) 9
- B) 15

C) 21

D) 23

Answer: D) 23

Explanation: A prime number is a whole number greater than 1 that has only two factors: 1 and itself. 9 is divisible by 3, 15 is divisible by 3 and 5, and 21 is divisible by 3 and 7. 23 is only divisible by 1 and 23.

Question 497:

If 5 apples cost \$2.50, what is the cost of 8 apples?

A) \$3.00

B) \$3.50

C) \$4.00

D) \$4.50

Answer: C) \$4.00

Explanation: First, find the cost of one apple:  $\$2.50 / 5 = \$0.50$  per apple. Then, multiply the cost per apple by the desired number of apples:  $\$0.50 \times 8 = \$4.00$ .

Question 498:

What is the next number in the sequence: 2, 5, 11, 23, ...?

A) 35

B) 46

C) 47

D) 51

Answer: C) 47

Explanation: The pattern is to multiply the previous number by 2 and then add 1.  $22 + 1 = 5$ .  $52 + 1 = 11$ .  $112 + 1 = 23$ .  $232 + 1 = 47$ .

Question 499:

A rectangular prism has a length of 5 cm, a width of 3 cm, and a height of 4 cm. What is its surface area?

- A)  $60 \text{ cm}^2$
- B)  $94 \text{ cm}^2$
- C)  $47 \text{ cm}^2$
- D)  $120 \text{ cm}^2$

Answer: B)  $94 \text{ cm}^2$

Explanation: The formula for the surface area of a rectangular prism is  $2(lw + lh + wh)$ .  $SA = 2((53) + (54) + (34)) = 2(15 + 20 + 12) = 2(47) = 94 \text{ cm}^2$ .

Question 500:

Simplify the ratio 18:24.

- A) 2:3
- B) 3:4
- C) 4:5
- D) 9:12

Answer: B) 3:4

Explanation: To simplify a ratio, find the greatest common factor (GCF) of both numbers and divide both numbers by it. The GCF of 18 and 24 is 6.  $18 \div 6 = 3$ .  $24 \div 6 = 4$ . The simplified ratio is 3:4.

Question 501:

What is the median of the following set of numbers: 7, 2, 9, 4, 11, 5?

- A) 4.5
- B) 5
- C) 6
- D) 7

Answer: C) 6

Explanation: First, arrange the numbers in order: 2, 4, 5, 7, 9, 11. Since there is an even number of values, the median is the average of the two middle numbers (5 and 7).  $(5 + 7) / 2 = 12 / 2 = 6$ .

Question 502:

If  $y = 2x + 5$ , and  $x = 3$ , what is the value of  $y$ ?

- A) 8
- B) 10
- C) 11
- D) 13

Answer: C) 11

Explanation: Substitute the value of  $x$  into the equation:  $y = 2(3) + 5$ .  $y = 6 + 5$ .  $y = 11$ .

Question 503:

A spinner is divided into 5 equal sections, colored red, blue, green, yellow, and purple. What is the probability of the spinner NOT landing on green?

- A)  $1/5$
- B)  $2/5$
- C)  $3/5$
- D)  $4/5$

Answer: D)  $4/5$

Explanation: There are 5 possible outcomes. The probability of landing on green is  $1/5$ . The probability of NOT landing on green is  $1 - P(\text{green})$ , which is  $1 - 1/5 = 4/5$ . Alternatively, there are 4 colors that are not green, so the probability is  $4/5$ .

Question 504:

What is 4 factorial ( $4!$ )?

- A) 10
- B) 16
- C) 24
- D) 120

Answer: C) 24

Explanation: The factorial of a number is the product of all positive integers up to that number.  $4! = 4 \times 3 \times 2 \times 1 = 24$ .

Question 505:

The sum of two numbers is 25, and their difference is 5. What are the two numbers?

- A) 10 and 15
- B) 12 and 13
- C) 5 and 20
- D) 8 and 17

Answer: A) 10 and 15

Explanation: You can set up a system of equations:  $x + y = 25$  and  $x - y = 5$ . Adding the two equations gives  $2x = 30$ , so  $x = 15$ . Substituting  $x$  back into the first equation gives  $15 + y = 25$ , so  $y = 10$ . The numbers are 10 and 15.

Question 506:

What is the circumference of a circle with a diameter of 10 meters? (Use  $\pi \approx 3.14$ )

- A) 15.7 meters
- B) 31.4 meters
- C) 62.8 meters
- D) 78.5 meters

Answer: B) 31.4 meters

Explanation: The formula for circumference is  $C = \pi d$  (pi times diameter).  $C = 3.1410 = 31.4$  meters.

Question 507:

Express 0.05 as a percentage.

- A) 0.05%
- B) 0.5%
- C) 5%
- D) 50%

Answer: C) 5%

Explanation: To convert a decimal to a percentage, multiply by 100 and add the percent sign.  $0.05100 = 5\%$ .

Question 508:

A right-angled triangle has legs of length 6 cm and 8 cm. What is the length of the hypotenuse?

- A) 10 cm
- B) 12 cm
- C) 14 cm
- D) 28 cm

Answer: A) 10 cm

Explanation: Use the Pythagorean theorem:  $a^2 + b^2 = c^2$ .  $6^2 + 8^2 = c^2$ .  $36 + 64 = c^2$ .  $100 = c^2$ .  $c = \sqrt{100} = 10$  cm.

Question 509:

If you have 3 shirts and 4 pairs of pants, how many different outfits can you create?

- A) 7
- B) 10
- C) 12
- D) 16

Answer: C) 12

Explanation: This is a counting principle problem. To find the total number of combinations, multiply the number of options for each choice: 3 shirts  $\times$  4 pants = 12 outfits.

Question 510:

What is the value of x in the proportion  $3/5 = x/20$ ?

- A) 9
- B) 12
- C) 15
- D) 18

Answer: B) 12

Explanation: To solve the proportion, you can cross-multiply:  $5x = 320$ .  $5x = 60$ . Divide both sides by 5:  $x = 12$ .

Question 511:

Calculate:  $(-5)(-4) + 3$

- A) -23

B) -17

C) 17

D) 23

Answer: D) 23

Explanation: Following the order of operations (PEMDAS/BODMAS), multiplication comes before addition.  $(-5)(-4) = 20$ . Then,  $20 + 3 = 23$ .

Question 512:

A bookstore has 300 books. 40% are fiction. How many non-fiction books are there?

A) 120

B) 150

C) 180

D) 200

Answer: C) 180

Explanation: If 40% are fiction, then  $100\% - 40\% = 60\%$  are non-fiction. To find the number of non-fiction books, calculate 60% of 300:  $0.60 \times 300 = 180$ .

Question 513:

What is the mode of the following data set: 2, 4, 5, 4, 6, 7, 4, 8, 5?

A) 2

B) 4

C) 5

D) 6

Answer: B) 4

Explanation: The mode is the number that appears most frequently in a data set. The number 4 appears three times, which is more than any other number.

Question 514:

What is the Roman numeral for 49?

- A) XXXXIX
- B) IL
- C) XLIX
- D) LD

Answer: C) XLIX

Explanation: In Roman numerals, 40 is represented as XL (10 before 50), and 9 is represented as IX (1 before 10). Together, they form XLIX.

Question 515:

A rectangular field measures 100 meters by 50 meters. What is its area in square meters?

- A) 300 m<sup>2</sup>
- B) 1500 m<sup>2</sup>
- C) 5000 m<sup>2</sup>
- D) 10000 m<sup>2</sup>

Answer: C) 5000 m<sup>2</sup>

Explanation: The area of a rectangle is length times width. Area = 100 m × 50 m = 5000 m<sup>2</sup>.

Question 516:

If a dozen eggs cost \$3.60, what is the cost of one egg?

- A) \$0.25
- B) \$0.30

- C) \$0.35
- D) \$0.40

Answer: B) \$0.30

Explanation: A dozen is 12. To find the cost of one egg, divide the total cost by the number of eggs:  $\$3.60 / 12 = \$0.30$ .

Question 517:

Solve for a:  $a/4 + 2 = 5$

- A) 8
- B) 12
- C) 16
- D) 28

Answer: B) 12

Explanation: First, subtract 2 from both sides:  $a/4 = 3$ . Then, multiply both sides by 4:  $a = 12$ .

Question 518:

What is the sum of the interior angles of a pentagon?

- A)  $180^\circ$
- B)  $360^\circ$
- C)  $540^\circ$
- D)  $720^\circ$

Answer: C)  $540^\circ$

Explanation: The formula for the sum of the interior angles of a polygon is  $(n-2)180^\circ$ , where  $n$  is the number of sides. For a pentagon,  $n=5$ . So,  $(5-2)180^\circ = 3180^\circ = 540^\circ$ .

Question 519:

Which fraction is equivalent to 80%?

- A) 1/8
- B) 3/4
- C) 4/5
- D) 5/6

Answer: C) 4/5

Explanation: 80% means 80 out of 100, or 80/100. This fraction can be simplified by dividing both the numerator and the denominator by their greatest common factor, which is 20.  $80 \div 20 = 4$ .  $100 \div 20 = 5$ . So, the fraction is 4/5.

Question 520:

A box contains 20 items, of which 5 are defective. What is the probability of picking a non-defective item?

- A) 1/4
- B) 1/3
- C) 3/4
- D) 4/5

Answer: C) 3/4

Explanation: If 5 items are defective, then  $20 - 5 = 15$  items are non-defective. The probability of picking a non-defective item is 15/20. This fraction simplifies to 3/4.

Question 521:

What is the square root of 144?

- A) 10
- B) 11

C) 12

D) 14

Answer: C) 12

Explanation: The square root of a number is a value that, when multiplied by itself, gives the original number.  $12 \times 12 = 144$ .

Question 522:

If a circle has a circumference of  $18\pi$  cm, what is its radius?

A) 3 cm

B) 6 cm

C) 9 cm

D) 18 cm

Answer: C) 9 cm

Explanation: The formula for circumference is  $C = 2\pi r$ . We are given  $C = 18\pi$ . So,  $18\pi = 2\pi r$ . Divide both sides by  $2\pi$ :  $r = 18\pi / 2\pi = 9$  cm.

Question 523:

Calculate:  $10 - 3(2 + 1)$

A) 1

B) 7

C) 19

D) 21

Answer: A) 1

Explanation: Following the order of operations (PEMDAS/BODMAS): First, solve the parentheses:  $2 + 1 = 3$ . The expression becomes  $10 - 33$ . Next, do the multiplication:  $33 = 9$ . The expression becomes  $10 - 9$ . Finally, do the subtraction:  $10 - 9 = 1$ .

Question 524:

A student scored 85, 90, and 95 on three tests. What score is needed on the fourth test to have an average of 90?

- A) 85
- B) 90
- C) 95
- D) 100

Answer: B) 90

Explanation: To have an average of 90 over four tests, the total score must be  $90 \times 4 = 360$ . The sum of the first three scores is  $85 + 90 + 95 = 270$ . The score needed on the fourth test is  $360 - 270 = 90$ .

Question 525:

What is the value of  $7^0$ ?

- A) 0
- B) 1
- C) 7
- D) Undefined

Answer: B) 1

Explanation: Any non-zero number raised to the power of zero is equal to 1.

Question 526:

A phone plan costs \$20 per month plus \$0.10 per minute of calls. If a bill was \$27.50, how many minutes were used?

- A) 50 minutes
- B) 75 minutes
- C) 100 minutes
- D) 275 minutes

Answer: B) 75 minutes

Explanation: First, subtract the monthly fee from the total bill to find the cost of the minutes:  $\$27.50 - \$20.00 = \$7.50$ . Then, divide this amount by the cost per minute:  $\$7.50 / \$0.10$  per minute = 75 minutes.

Question 527:

What is the volume of a cylinder with a radius of 3 inches and a height of 10 inches? (Use  $\pi \approx 3.14$ )

- A) 94.2 in<sup>3</sup>
- B) 188.4 in<sup>3</sup>
- C) 282.6 in<sup>3</sup>
- D) 942 in<sup>3</sup>

Answer: C) 282.6 in<sup>3</sup>

Explanation: The formula for the volume of a cylinder is  $V = \pi r^2 h$ .  $V = 3.14(3^2)10 = 3.14910 = 28.2610 = 282.6$  in<sup>3</sup>.

Question 528:

If two angles in a triangle are  $45^\circ$  and  $45^\circ$ , what kind of triangle is it?

- A) Equilateral
- B) Scalene
- C) Isosceles right triangle

D) Obtuse

Answer: C) Isosceles right triangle

Explanation: The third angle is  $180^\circ - 45^\circ - 45^\circ = 90^\circ$ , which makes it a right triangle. Since two angles are equal, the sides opposite those angles are also equal, making it an isosceles triangle.

Question 529:

Simplify:  $\sqrt{32}$

- A)  $2\sqrt{8}$
- B)  $4\sqrt{2}$
- C)  $8\sqrt{2}$
- D) 16

Answer: B)  $4\sqrt{2}$

Explanation: To simplify a square root, find the largest perfect square factor of the number inside the root. The factors of 32 are 16 and 2, where 16 is a perfect square. So,  $\sqrt{32} = \sqrt{(16 \cdot 2)} = \sqrt{16}\sqrt{2} = 4\sqrt{2}$ .

Question 530:

A baker uses  $\frac{1}{4}$  cup of sugar for every  $\frac{1}{2}$  cup of flour. If the baker uses 3 cups of flour, how much sugar is needed?

- A) 1 cup
- B) 1.5 cups
- C) 2 cups
- D) 6 cups

Answer: B) 1.5 cups

Explanation: The ratio of sugar to flour is  $(1/4) / (1/2) = 1/4 \cdot 2/1 = 1/2$ . This means the amount of sugar is half the amount of flour. If 3 cups of flour are used, then  $3(1/2) = 1.5$  cups of sugar are needed.

Question 531:

What is the distance between the points  $(2, 3)$  and  $(5, 7)$  on a coordinate plane?

- A) 3
- B) 4
- C) 5
- D) 7

Answer: C) 5

Explanation: Use the distance formula:  $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ .  $d = \sqrt{(5 - 2)^2 + (7 - 3)^2} = \sqrt{(3^2 + 4^2)} = \sqrt{9 + 16} = \sqrt{25} = 5$ .

Question 532:

A sale offers a 20% discount. If an item's sale price is \$40, what was the original price?

- A) \$48
- B) \$50
- C) \$60
- D) \$32

Answer: B) \$50

Explanation: If there is a 20% discount, the sale price is 80% of the original price. Let  $P$  be the original price.  $0.80P = \$40$ . To find  $P$ , divide \$40 by 0.80.  $P = 40 / 0.8 = \$50$ .

Question 533:

What is the slope of the line that passes through the points  $(1, 2)$  and  $(3, 8)$ ?

- A) 1/3
- B) 2
- C) 3
- D) 5

Answer: C) 3

Explanation: The formula for the slope (m) is  $(y_2 - y_1) / (x_2 - x_1)$ .  $m = (8 - 2) / (3 - 1) = 6 / 2 = 3$ .

Question 534:

If  $3x - 7 = 2x + 1$ , what is the value of x?

- A) -8
- B) -6
- C) 6
- D) 8

Answer: D) 8

Explanation: Subtract 2x from both sides:  $x - 7 = 1$ . Add 7 to both sides:  $x = 8$ .

Question 535:

A coin is flipped three times. What is the probability of getting heads all three times?

- A) 1/2
- B) 1/3
- C) 1/4
- D) 1/8

Answer: D) 1/8

Explanation: The probability of getting heads on one flip is  $1/2$ . For three independent events, you multiply their probabilities:  $(1/2)(1/2)(1/2) = 1/8$ .

Question 536:

The ratio of boys to girls in a class is 3:5. If there are 32 students in total, how many are boys?

- A) 9
- B) 12
- C) 15
- D) 20

Answer: B) 12

Explanation: The ratio 3:5 means there are  $3+5 = 8$  parts in total. The total number of students is 32. To find the value of one part, divide the total students by the total parts:  $32 / 8 = 4$  students per part. The number of boys is 3 parts, so  $3 \times 4 = 12$  boys.

Question 537:

What is the area of a trapezoid with bases of 8 cm and 12 cm and a height of 5 cm?

- A) 50  $\text{cm}^2$
- B) 75  $\text{cm}^2$
- C) 100  $\text{cm}^2$
- D) 200  $\text{cm}^2$

Answer: A) 50  $\text{cm}^2$

Explanation: The formula for the area of a trapezoid is  $A = ((\text{base}_1 + \text{base}_2) / 2)\text{height}$ .  $A = ((8 + 12) / 2)5 = (20 / 2)5 = 105 = 50 \text{ cm}^2$ .

Question 538:

If an angle measures 75 degrees, what is the measure of its complementary angle?

- A) 15 degrees
- B) 25 degrees
- C) 105 degrees
- D) 285 degrees

Answer: A) 15 degrees

Explanation: Complementary angles are two angles that add up to 90 degrees. To find the complement, subtract the given angle from 90:  $90^\circ - 75^\circ = 15^\circ$ .

Question 539:

A car's value depreciates by 10% each year. If the car was bought for \$20,000, what is its value after one year?

- A) \$10,000
- B) \$18,000
- C) \$19,000
- D) \$19,800

Answer: B) \$18,000

Explanation: Calculate the depreciation amount: 10% of \$20,000 is  $0.10 \times 20,000 = \$2,000$ . Subtract this from the original value:  $\$20,000 - \$2,000 = \$18,000$ .

Question 540:

What is the product of  $(x + 4)$  and  $(x - 3)$ ?

- A)  $x^2 + x - 12$
- B)  $x^2 - x - 12$
- C)  $x^2 + 7x - 12$
- D)  $x^2 - 12$

Answer: A)  $x^2 + x - 12$

Explanation: Use the FOIL method (First, Outer, Inner, Last). First:  $xx = x^2$ . Outer:  $x-3 = -3x$ . Inner:  $4x = 4x$ . Last:  $4-3 = -12$ . Combine the terms:  $x^2 - 3x + 4x - 12 = x^2 + x - 12$ .

### Part 3: Ability

(Questions 541-600)

Question 541:

Which of the following words is the best analogy for "Doctor is to Hospital"?

- A) Teacher is to School
- B) Chef is to Food
- C) Pilot is to Plane
- D) Farmer is to Crop

Answer: A) Teacher is to School

Explanation: A doctor is a professional who works in a hospital. Similarly, a teacher is a professional who works in a school. The other options describe a professional and their product or tool, not their primary workplace.

Question 542:

Find the next number in the sequence: 3, 6, 12, 24, ...

- A) 36
- B) 48
- C) 60
- D) 72

Answer: B) 48

Explanation: The pattern in this sequence is to multiply the previous number by 2. So,  $32 = 6, 62 = 12, 122 = 24$ , and  $242 = 48$ .

Question 543:

If all cats are mammals, and a tiger is a cat, which of the following statements must be true?

- A) All mammals are tigers.
- B) A tiger is a mammal.
- C) Some cats are not mammals.
- D) All cats are tigers.

Answer: B) A tiger is a mammal.

Explanation: This is a simple logical deduction. If the first two statements are true, it follows that a tiger, being a cat, must also be a mammal.

Question 544:

Which of the following figures is the odd one out? (This question would be accompanied by images of a square, a rectangle, a triangle, and a circle)

- A) Square
- B) Rectangle
- C) Triangle
- D) Circle

Answer: D) Circle

Explanation: The square, rectangle, and triangle are all polygons, meaning they are made of straight lines. The circle is a curved shape and is not a polygon.

Question 545:

"Optimist" is to "Pessimist" as "Generous" is to:

- A) Kind
- B) Selfish
- C) Wealthy
- D) Happy

Answer: B) Selfish

Explanation: An optimist and a pessimist are opposites. Similarly, a generous person and a selfish person are opposites.

Question 546:

Find the next letter in the series: A, C, F, J, O, ...

- A) P
- B) S
- C) U
- D) V

Answer: C) U

Explanation: The pattern is based on the number of letters skipped between each term, increasing by one each time. A to C skips 1 letter (B). C to F skips 2 letters (D, E). F to J skips 3 letters (G, H, I). J to O skips 4 letters (K, L, M, N). Therefore, the next term will skip 5 letters (P, Q, R, S, T), landing on U.

Question 547:

"Tree" is to "Forest" as "Soldier" is to:

- A) Gun
- B) War
- C) Army
- D) Uniform

Answer: C) Army

Explanation: A tree is a single component of a forest. Similarly, a soldier is a single component of an army.

Question 548:

Which of the following does not belong?

- A) Car
- B) Bicycle
- C) Boat
- D) Train

Answer: B) Bicycle

Explanation: A car, boat, and train are all powered by engines. A bicycle is powered by human effort.

Question 549:

If you rearrange the letters "RAPIS," you would get the name of a:

- A) Country
- B) City
- C) Animal
- D) Planet

Answer: B) City

Explanation: The rearranged letters spell "PARIS."

Question 550:

"Thermometer" is to "Temperature" as "Compass" is to:

- A) Speed
- B) Direction
- C) Altitude
- D) Pressure

Answer: B) Direction

Explanation: A thermometer is an instrument used to measure temperature. A compass is an instrument used to determine direction.

Question 551:

Find the missing number: 81, 27, 9, 3, \_\_

- A) 0
- B) 1
- C) 1/3
- D) -3

Answer: B) 1

Explanation: The pattern is to divide the previous number by 3.  $81 / 3 = 27$ .  $27 / 3 = 9$ .  $9 / 3 = 3$ .  $3 / 3 = 1$ .

Question 552:

"Book" is to "Chapter" as "House" is to:

- A) Door
- B) Roof
- C) Room
- D) Window

Answer: C) Room

Explanation: A chapter is a main division of a book. A room is a main division of a house.

Question 553:

Which of the following is least like the others?

- A) Apple
- B) Banana
- C) Carrot
- D) Grape

Answer: C) Carrot

Explanation: An apple, banana, and grape are all fruits. A carrot is a vegetable.

Question 554:

"Pen" is to "Write" as "Shovel" is to:

- A) Garden
- B) Dirt
- C) Dig
- D) Handle

Answer: C) Dig

Explanation: A pen is a tool used for the action of writing. A shovel is a tool used for the action of digging.

Question 555:

Find the next pair of letters in the series: AZ, BY, CX, \_\_

- A) DW
- B) DU

C) EV

D) DX

Answer: A) DW

Explanation: The series consists of two separate patterns. The first letter in each pair moves forward through the alphabet (A, B, C, D...). The second letter moves backward through the alphabet (Z, Y, X, W...).

Question 556:

"Island" is to "Water" as "Oasis" is to:

A) Mirage

B) Sand

C) Desert

D) Palm Tree

Answer: C) Desert

Explanation: An island is a piece of land surrounded by water. An oasis is a fertile spot surrounded by desert. The relationship is "a small area of one thing surrounded by a large area of another."

Question 557:

Which word does not belong in the group?

A) Triangle

B) Square

C) Pentagon

D) Cube

Answer: D) Cube

Explanation: A triangle, square, and pentagon are all two-dimensional shapes (polygons). A cube is a three-dimensional solid.

Question 558:

"Glove" is to "Hand" as "Shoe" is to:

- A) Sock
- B) Foot
- C) Lace
- D) Walk

Answer: B) Foot

Explanation: A glove is a piece of clothing worn on the hand. A shoe is a piece of clothing worn on the foot.

Question 559:

Find the next number in the sequence: 1, 4, 9, 16, 25, \_\_

- A) 30
- B) 36
- C) 49
- D) 64

Answer: B) 36

Explanation: The sequence consists of perfect squares:  $1^2=1$ ,  $2^2=4$ ,  $3^2=9$ ,  $4^2=16$ ,  $5^2=25$ . The next number is  $6^2=36$ .

Question 560:

"Lawyer" is to "Courtroom" as "Scientist" is to:

- A) Experiment

- B) Beaker
- C) Laboratory
- D) Discovery

Answer: C) Laboratory

Explanation: A courtroom is the primary workplace for a lawyer. A laboratory is the primary workplace for a scientist.

Question 561:

Which of the following is the opposite of "brave"?

- A) Strong
- B) Cowardly
- C) Bold
- D) Heroic

Answer: B) Cowardly

Explanation: "Brave" means ready to face and endure danger or pain. "Cowardly" means lacking courage.

Question 562:

"Tired" is to "Sleep" as "Hungry" is to:

- A) Thirsty
- B) Food
- C) Eat
- D) Drink

Answer: C) Eat

Explanation: When one is tired, the solution is to sleep (an action). When one is hungry, the solution is to eat (an action).

Question 563:

Find the missing letters: C E G I K \_\_\_ \_\_\_

- A) L M
- B) M N
- C) L N
- D) M O

Answer: D) M O

Explanation: The series consists of every other letter of the alphabet, starting with C. C, (D), E, (F), G, (H), I, (J), K, (L), M, (N), O.

Question 564:

"Scale" is to "Fish" as "Bark" is to:

- A) Dog
- B) Tree
- C) Leaf
- D) Wood

Answer: B) Tree

Explanation: A scale is the outer covering of a fish. Bark is the outer covering of a tree.

Question 565:

Which of the following does not belong?

- A) Inch
- B) Ounce

C) Foot

D) Yard

Answer: B) Ounce

Explanation: An inch, foot, and yard are all units of length. An ounce is a unit of weight.

Question 566:

"Author" is to "Book" as "Composer" is to:

A) Music

B) Symphony

C) Orchestra

D) Piano

Answer: B) Symphony

Explanation: An author creates a book (a specific work). A composer creates a symphony (a specific work). "Music" is too general.

Question 567:

Find the next number in the series: 5, 10, 8, 13, 11, 16, 14, \_\_

A) 12

B) 17

C) 19

D) 21

Answer: C) 19

Explanation: This is an alternating series. The pattern is +5, -2, +5, -2, and so on.  $5+5=10$ ,  $10-2=8$ ,  $8+5=13$ ,  $13-2=11$ ,  $11+5=16$ ,  $16-2=14$ ,  $14+5=19$ .

Question 568:

"Spoke" is to "Wheel" as "Letter" is to:

- A) Alphabet
- B) Mail
- C) Word
- D) Envelope

Answer: C) Word

Explanation: A spoke is one of the parts that make up a wheel. A letter is one of the parts that make up a word.

Question 569:

If you are facing North and turn 90 degrees to your right, then turn 180 degrees, which direction are you now facing?

- A) North
- B) South
- C) East
- D) West

Answer: D) West

Explanation: Starting North, a 90-degree right turn makes you face East. From East, a 180-degree turn (either left or right) makes you face the opposite direction, which is West.

Question 570:

"Melt" is to "Liquid" as "Freeze" is to:

- A) Ice
- B) Cold
- C) Solid

D) Water

Answer: C) Solid

Explanation: Melting is the process that turns something into a liquid state. Freezing is the process that turns something into a solid state.

Question 571:

Which of the following is least like the others?

- A) Happy
- B) Joyful
- C) Sad
- D) Elated

Answer: C) Sad

Explanation: Happy, joyful, and elated are all synonyms describing a positive emotional state. Sad describes a negative emotional state.

Question 572:

"Camera" is to "Photograph" as "Telescope" is to:

- A) Star
- B) View
- C) Lens
- D) Planet

Answer: B) View

Explanation: A camera is a tool used to create a photograph (a product). A telescope is a tool used to create a view of distant objects (a product/result).

Question 573:

Find the next number in the sequence: 1, 1, 2, 3, 5, 8, 13, \_\_

- A) 17
- B) 21
- C) 24
- D) 26

Answer: B) 21

Explanation: This is the Fibonacci sequence, where each number is the sum of the two preceding ones.  $1+1=2$ ,  $1+2=3$ ,  $2+3=5$ ,  $3+5=8$ ,  $5+8=13$ ,  $8+13=21$ .

Question 574:

"Student" is to "Diploma" as "Runner" is to:

- A) Race
- B) Medal
- C) Track
- D) Shoes

Answer: B) Medal

Explanation: A diploma is an award or proof of achievement for a student. A medal is an award or proof of achievement for a runner.

Question 575:

Which word does not belong?

- A) See
- B) Hear
- C) Touch
- D) Think

Answer: D) Think

Explanation: See, hear, and touch are three of the five physical senses. Think is a mental process, not a physical sense.

Question 576:

"Sun" is to "Day" as "Moon" is to:

- A) Star
- B) Night
- C) Sky
- D) Dark

Answer: B) Night

Explanation: The sun is the primary celestial body associated with and visible during the day. The moon is the primary celestial body associated with and visible during the night.

Question 577:

Find the missing number: 4, 10, 22, 46, \_\_

- A) 94
- B) 92
- C) 88
- D) 70

Answer: A) 94

Explanation: The pattern is to multiply the previous number by 2 and then add 2.  $4 \times 2 + 2 = 10$ .  $10 \times 2 + 2 = 22$ .  $22 \times 2 + 2 = 46$ .  $46 \times 2 + 2 = 94$ .

Question 578:

"Pilot" is to "Airplane" as "Captain" is to:

- A) Crew
- B) Ocean
- C) Ship
- D) Uniform

Answer: C) Ship

Explanation: A pilot is in command of an airplane. A captain is in command of a ship.

Question 579:

Which of the following is the opposite of "expand"?

- A) Grow
- B) Widen
- C) Contract
- D) Stretch

Answer: C) Contract

Explanation: To expand is to become larger or more extensive. To contract is to become smaller or draw together.

Question 580:

"Page" is to "Book" as "Leaf" is to:

- A) Tree
- B) Branch
- C) Flower
- D) Plant

Answer: A) Tree

Explanation: A page is a single sheet that is part of a book. A leaf is a single growth that is part of a tree.

Question 581:

Find the next letters in the series: B, E, H, K, N, \_\_

- A) P
- B) Q
- C) R
- D) S

Answer: B) Q

Explanation: The pattern is to skip two letters of the alphabet between each term. B (c,d) E (f,g) H (i,j) K (l,m) N (o,p) Q.

Question 582:

"Heat" is to "Boil" as "Cold" is to:

- A) Ice
- B) Freeze
- C) Winter
- D) Snow

Answer: B) Freeze

Explanation: Applying heat can cause the action of boiling. Applying cold can cause the action of freezing.

Question 583:

Which of the following does not belong?

- A) Guitar
- B) Violin
- C) Cello
- D) Flute

Answer: D) Flute

Explanation: The guitar, violin, and cello are all string instruments. The flute is a woodwind instrument.

Question 584:

"Doctor" is to "Patient" as "Teacher" is to:

- A) School
- B) Class
- C) Student
- D) Subject

Answer: C) Student

Explanation: A doctor provides a service to a patient. A teacher provides a service to a student.

Question 585:

Find the next number in the sequence: 9, 16, 25, 36, 49, \_\_

- A) 56
- B) 64
- C) 72
- D) 81

Answer: B) 64

Explanation: The sequence is a list of perfect squares, starting with  $3^2$ .  $3^2=9$ ,  $4^2=16$ ,  $5^2=25$ ,  $6^2=36$ ,  $7^2=49$ ,  $8^2=64$ .

Question 586:

"Oar" is to "Boat" as "Pedal" is to:

- A) Foot
- B) Car
- C) Bicycle
- D) Road

Answer: C) Bicycle

Explanation: An oar is used to propel a boat. A pedal is used to propel a bicycle.

Question 587:

Which of the following is the opposite of "ancient"?

- A) Old
- B) Historical
- C) Modern
- D) Past

Answer: C) Modern

Explanation: "Ancient" refers to something from the very distant past. "Modern" refers to the present or recent times.

Question 588:

"Atom" is to "Molecule" as "Cell" is to:

- A) Organism
- B) Tissue

- C) Body
- D) Blood

Answer: B) Tissue

Explanation: Atoms combine to form a molecule. Cells combine to form a tissue.

Question 589:

Find the missing number: 121, 100, 81, 64, \_\_, 36

- A) 55
- B) 50
- C) 49
- D) 45

Answer: C) 49

Explanation: The sequence consists of perfect squares in descending order.  $11^2=121$ ,  $10^2=100$ ,  $9^2=81$ ,  $8^2=64$ ,  $7^2=49$ ,  $6^2=36$ .

Question 590:

"Symphony" is to "Composer" as "Novel" is to:

- A) Reader
- B) Publisher
- C) Author
- D) Character

Answer: C) Author

Explanation: A symphony is created by a composer. A novel is created by an author.

Question 591:

Which of the following does not belong?

- A) Jupiter
- B) Mars
- C) Sun
- D) Venus

Answer: C) Sun

Explanation: Jupiter, Mars, and Venus are all planets in our solar system. The Sun is a star.

Question 592:

"Sad" is to "Cry" as "Happy" is to:

- A) Frown
- B) Laugh
- C) Joke
- D) Smile

Answer: B) Laugh

Explanation: Crying is a common action or expression resulting from being sad. Laughing is a common action or expression resulting from being happy. While smiling is also related, laughing is a more active counterpart to crying.

Question 593:

Find the next pair in the series: 2A, 4B, 8C, 16D, \_\_

- A) 20E
- B) 24E
- C) 32E
- D) 64E

Answer: C) 32E

Explanation: The series has two patterns. The number is multiplied by 2 each time (2, 4, 8, 16, 32). The letter progresses alphabetically (A, B, C, D, E).

Question 594:

"Frame" is to "Picture" as "Border" is to:

- A) Country
- B) Edge
- C) Line
- D) Map

Answer: A) Country

Explanation: A frame goes around a picture. A border goes around a country.

Question 595:

Which of the following is the opposite of "transparent"?

- A) Clear
- B) Opaque
- C) Translucent
- D) Glassy

Answer: B) Opaque

Explanation: "Transparent" means allowing light to pass through so that objects behind can be distinctly seen. "Opaque" means not able to be seen through; not transparent.

Question 596:

"Stanza" is to "Poem" as "Paragraph" is to:

- A) Sentence
- B) Word
- C) Essay
- D) Letter

Answer: C) Essay

Explanation: A stanza is a group of lines forming a unit in a poem. A paragraph is a group of sentences forming a unit in an essay or other piece of writing.

Question 597:

Find the next number in the sequence: 3, 4, 6, 9, 13, \_\_

- A) 15
- B) 16
- C) 17
- D) 18

Answer: D) 18

Explanation: The difference between consecutive numbers increases by 1 each time.  $4-3=1$ ,  $6-4=2$ ,  $9-6=3$ ,  $13-9=4$ . The next difference will be 5, so  $13 + 5 = 18$ .

Question 598:

"Index" is to "Book" as "Table of Contents" is to:

- A) Chapter
- B) Magazine
- C) Page
- D) Glossary

Answer: B) Magazine

Explanation: An index helps you find specific topics in a book. A table of contents helps you find specific articles or sections in a magazine (or book). The relationship is a navigational aid to its corresponding publication type.

Question 599:

Which of the following does not belong?

- A) Eagle
- B) Ostrich
- C) Penguin
- D) Emu

Answer: A) Eagle

Explanation: The ostrich, penguin, and emu are all flightless birds. The eagle is a bird known for its powerful flight.

Question 600:

"Key" is to "Lock" as "Password" is to:

- A) Computer
- B) Account
- C) Secret
- D) User

Answer: B) Account

Explanation: A key is used to gain access to a lock. A password is used to gain access to an account.