DUMPSARENA

Test of Essential Academic Skills: Reading Comprehension, Sentence Correction, Math Problem Solving, Sentence Completion

Test Prep TEAS-Test

Version Demo

Total Demo Questions: 49

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Topic Break Down

Topic	No. of Questions
Topic 1, Reading Comprehension	111
Topic 2, Sentence Correction	135
Topic 3, Math Problem Solving	107
Topic 4, Sentence Completion	92
Topic 5, Mix Questions	47
Total	492

QUESTION NO: 1

Enrique weighs 5 pounds more than twice Brendan's weight.

If their total weight is 225 pounds, how much does Enrique weigh?

A. 125 pounds

B. 152 pounds

C. 165 pounds

D. 115 pounds

ANSWER: B

Explanation:

152 pounds is the correct choice when the result is expressed to the nearest whole pound. Let Brendan's weight be represented by *b*. The statement that Enrique weighs 5 pounds more than twice Brendan's weight translates to Enrique's weight being *2b + 5*. Because their combined weight is 225 pounds, the equation is *b + (2b + 5) = 225*. Combining like terms gives *3b + 5 = 225*, so *3b = 220* and Brendan weighs *220/3* pounds, or approximately 73.33 pounds. Enrique's weight is therefore *2(220/3) + 5 = 455/3* pounds, which is approximately 151.67 pounds. Rounding 151.67 to the nearest whole pound gives 152 pounds. This approach uses a variable to represent an unknown quantity, translates each verbal relationship into an algebraic expression, and then solves the resulting linear equation. For guidance on constructing equations from word problems, see Khan Academy: Creating equations from word problems. The arithmetic and rounding process are also consistent with standard linear-equation methods described by OpenStax Elementary Algebra.

QUESTION NO: 2

Which pyrimidine base is only found in RNA?

A. adenine

B. uracil

C. cytosine

D. guanine

ANSWER: B

Explanation:

Uracil is the pyrimidine base characteristically found in RNA. RNA nucleotides use uracil as one of their nitrogenous bases, where it pairs with adenine through hydrogen bonding in complementary RNA sequences. In contrast, DNA uses thymine in the corresponding role. This substitution is a fundamental chemical distinction between RNA and DNA and is frequently tested when identifying the components and base-pairing rules of nucleic acids. Pyrimidines are single-ring nitrogen-containing bases; in RNA, the pyrimidines are cytosine and uracil. Therefore, uracil is the correct response because it is the RNA-specific pyrimidine base in the standard nucleic-acid comparison. The National Human Genome Research Institute describes RNA as containing the bases adenine, cytosine, guanine, and uracil, while DNA contains thymine instead of uracil. See the NHGRI RNA glossary entry and the NCBI Bookshelf overview of DNA and RNA structure for further details.

QUESTION NO: 3

When W. Edwards Deming declared 'pay is not a motivation'. It is as a shock to many and sounds absurd to most of us.

A. It is as a shock to many and sounds absurd to most of us.

B. It was as a shock to many and sounds absurd to most of us.

C. It came as a shock to many and sounds absurd to most of us.

D. It comes as a shock to many and sounds absurd to most of us.

E. It may come as a shock to many and sounds absurd to most of us.

ANSWER: C

Explanation:

“It came as a shock to many and sounds absurd to most of us.” is the best revision because *came as a shock* is the standard idiomatic expression for describing a statement or event that surprised people. The past-tense verb *came* also fits the completed action introduced by “When W. Edwards Deming declared,” locating the initial reaction at the time of his declaration. The present-tense *sounds* can appropriately describe the continuing impression that Deming’s statement makes on people now: it was surprising when said and still seems unreasonable or startling to many readers. This distinction gives the sentence a clear time relationship without changing its intended meaning. In addition, using a concrete verb such as *came* makes the predicate complete and idiomatic; English commonly uses the pattern “come as a shock” rather than “be as a shock.” For guidance on maintaining clear verb tenses and expressing time relationships in sentences, see the Purdue OWL guide to verb tenses. For dictionary usage of the idiom, see the Cambridge Dictionary entry for “come as a shock”.

QUESTION NO: 4

"Sarah and Tommy danced at the wedding, Sarah’s mom took pictures."

This sentence is an example of what common mistake in sentence structure?

A. comma splice

B. incomplete sentence

C. compound sentence

D. sentence fragment

ANSWER: A

Explanation:

The correct answer is *comma splice*. The quoted sentence contains two independent clauses: “Sarah and Tommy danced at the wedding” expresses a complete thought, and “Sarah’s mom took pictures” also expresses a complete thought. Each clause could stand on its own as a sentence. A comma alone cannot properly join two independent clauses, so placing only a comma between them creates a comma splice. This is a common sentence-structure error because the writer has connected complete sentences without using appropriate punctuation or a coordinating conjunction. The sentence can be repaired by separating the clauses with a period, using a semicolon, or adding a coordinating conjunction after the comma—for example, “Sarah and Tommy danced at the wedding, and Sarah’s mom took pictures.” Understanding whether each part has a subject and a predicate that form a complete thought is the key to recognizing this error. The Purdue Online Writing Lab describes comma splices as errors caused by joining independent clauses with only a comma: Purdue OWL: Commas. See also UNC Writing Center: Fragments and Run-ons.

QUESTION NO: 5

A body of mass 30 kg is traveling in space at a speed of 10 m/s. Given that the formula for kinetic energy is KE = 0.5 × m × v2, and m is mass and v is speed of an object, what is its kinetic

energy?

A. 1000 J

B. 4600 J

C. 120 J

D. 1500 J

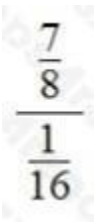
ANSWER: D

Explanation:

The correct answer is **1500 J**. Kinetic energy is the energy an object has because of its motion, and it is calculated with the formula KE = 0.5 × m × v². First, square the speed: 10 m/s × 10 m/s = 100 m²/s². Next, multiply the mass by the squared speed: 30 kg × 100 m²/s² = 3000 kg·m²/s². Finally, multiply by 0.5: 0.5 × 3000 = 1500. Therefore, the body's kinetic energy is 1500 joules. A joule is the SI unit of energy; in base units, one joule equals one kilogram-meter squared per second squared, which matches the units produced by the calculation. The object is traveling in space, but no additional information is needed because the stated mass and speed are sufficient to determine its classical kinetic energy. This calculation uses the standard kinetic-energy relationship for an object moving at a speed far below the speed of light. For further review, see OpenStax Physics: Work and Encyclopaedia Britannica: Kinetic Energy.

QUESTION NO: 6

Divide:



A. 7/128

B. 13

C. 3

D. 14

ANSWER: D

Explanation:

14 is correct. To divide fractions, rewrite the division as multiplication by the reciprocal of the divisor. In the displayed calculation, this changes the operation to multiplying 7/8 by 16/1. Multiply the numerators and denominators: (7 × 16)/(8 × 1) = 112/8. Simplifying 112/8 gives 14. This process is often described as "keep, change, flip": keep the first fraction, change division to multiplication, and flip the second fraction so that its numerator and denominator exchange places. The reciprocal is essential because division asks how many groups of the divisor fit into the dividend; multiplying by the reciprocal gives the equivalent result while using multiplication rules for fractions. The final value is a whole number because the denominator divides evenly into the numerator. For a review of fraction division and reciprocal-based computation, see OpenStax Prealgebra: Divide Fractions and Khan Academy: Dividing Fractions.

QUESTION NO: 7

If 42.8 kg is divided into two parts, in a ratio of 7/2, how many kg is the smaller share?

A. 9.51 kg

B. 12.22 kg

C. 0.856 kg

D. 21.4 kg

ANSWER: A

Explanation:

The correct answer is **9.51 kg**. A ratio of 7/2 means that the two shares consist of 7 equal ratio units and 2 equal ratio units, for a combined total of 9 units. Since the smaller share corresponds to 2 of those 9 units, first find the value of one ratio unit by dividing the total mass, 42.8 kg, by 9. This gives approximately 4.7556 kg per unit. Multiplying that unit value by 2 gives approximately 9.5111 kg for the smaller share. Rounded to the nearest hundredth of a kilogram, the result is 9.51 kg. This method—adding the ratio terms to determine the total number of equal parts, then assigning the requested number of parts—is the standard approach for dividing a quantity according to a ratio. The calculation can also be written directly as 42.8 × (2 ÷ (7 + 2)), which equals 9.5111… kg. For further guidance on ratio reasoning, see Khan Academy's ratio overview and OpenStax Prealgebra on ratios.

QUESTION NO: 8

Many organizations never attempt to find out their employers enjoy and derive satisfaction from their work.

A. Many organizations never attempt to find out their

B. Much organizations never attempt to find out their

C. More organizations never attempt to find out their

D. Most organizations never attempt to find out their

E. Many of organizations never attempt to find out their

ANSWER: A

Explanation:

Many organizations never attempt to find out their is the correct choice because *many* is the appropriate quantifier for a plural count noun such as *organizations*. An organization is a distinct, countable entity: one organization, two organizations, or many organizations. The phrase therefore creates a grammatically sound subject: "Many organizations." It also correctly uses the plural noun form, which agrees with the plural possessive pronoun *their* later in the sentence.

In standard English, quantifiers must match the type and number of noun they modify. Grammar guidance commonly identifies *many* as a determiner used with countable plural nouns. This construction is especially suitable when making a general statement about a substantial, unspecified number of organizations. For further guidance on determiners and their agreement with nouns, see the Purdue OWL guidance on agreement and the Cambridge Dictionary explanation of "many" and countable nouns.

QUESTION NO: 9

The lives of the most marginalized have ceased to engage many of our filmmakers, to have migrated to more 'happening' urban issues.

A. to has migrated to more 'happening' urban issues.

B. where have migrated to more 'happening' urban issues.

C. which have migrated to more 'happening' urban issues.

D. who have migrated to more 'happening' urban issues.

E. whom have migrated to more 'happening' urban issues.

ANSWER: D

Explanation:

The correct revision is “who have migrated to more 'happening' urban issues.” The phrase after the comma supplies additional information about “many of our filmmakers”: it identifies those filmmakers as the people who shifted their attention from marginalized people’s lives toward urban issues. Because the antecedent is people, the appropriate relative pronoun is *who*. It also functions as the subject of the relative clause, and the plural verb phrase “have migrated” agrees with the plural antecedent “filmmakers.” The resulting sentence reads smoothly and clearly: “The lives of the most marginalized have ceased to engage many of our filmmakers, who have migrated to more ‘happening’ urban issues.” This is a nonrestrictive relative clause, appropriately set off with a comma, because it adds descriptive information rather than defining which filmmakers are meant. Standard English grammar uses *who* for people when the pronoun is the subject of its clause. For guidance on selecting relative pronouns and distinguishing subject forms, see the Purdue Online Writing Lab’s relative-pronoun guidance and the Cambridge Dictionary grammar reference.

QUESTION NO: 10

Instead of focusing on your agitation, try paying attention to the underlying problem and resolving it. These could be an effective way to use anger positively.

A. These could be an effective way to use anger positively

B. This could be an effective way to use anger positively

C. Those could be an effective way to use anger positively

D. That could be an effective way to use anger positively

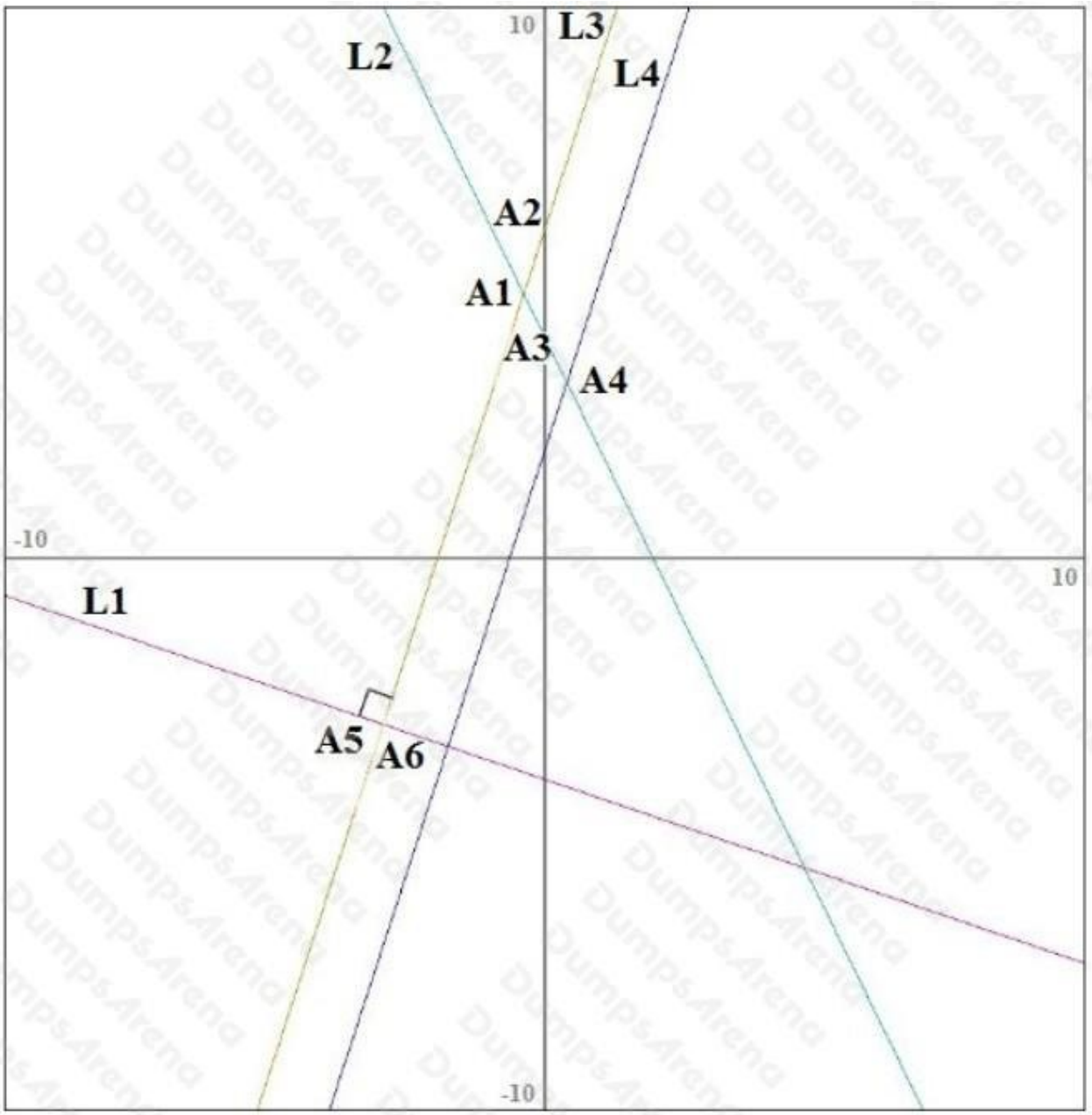
E. Which could be an effective way to use anger positively

ANSWER: B

Explanation:

This could be an effective way to use anger positively is correct because *this* is a singular demonstrative pronoun that clearly refers to the single preceding action or strategy: paying attention to the underlying problem and resolving it. Although that strategy contains more than one action, the sentence presents the entire approach as one method of responding to anger, so it takes the singular verb phrase *could be* and the singular noun phrase *an effective way*. Using *this* also creates a clear connection between the recommendation in the first sentence and the concluding statement about constructive anger management. In standard English, pronouns must agree with the number of the noun or idea they represent. When a pronoun refers to one complete thought, action, or situation, a singular pronoun is appropriate. This revision therefore produces a grammatically consistent and coherent pair of sentences. For guidance on pronoun agreement, see the Purdue Online Writing Lab. The broader principle that verbs agree with singular subjects is also summarized by Merriam-Webster’s subject-verb agreement guide.

QUESTION NO: 11



In the figure, which of the angles are acute angles?

A. angles A4 and A6

B. angles A1 and A4

C. angles A2 and A3

D. There are no acute angles in the figure.

ANSWER: C

Explanation:

angles A2 and A3 are acute angles because each represents an angle with a measure greater than 0 degrees and less than 90 degrees. Acute angles appear as narrow openings formed by two rays or line segments, rather than a square corner or a wider opening. In the figure, the openings labeled A2 and A3 are visibly smaller than a right angle, so they meet the definition of acute angles.

A right angle measures exactly 90 degrees and is commonly identified by the shape of a square corner. Comparing the labeled openings to that benchmark is the key visual strategy: any angle that is narrower than the 90-degree benchmark is acute. The labels A2 and A3 identify the two narrow angle regions in the diagram, making them the requested pair. This

classification follows the standard geometric definition of an acute angle, as described by Encyclopaedia Britannica and in the Math Is Fun angle guide.

QUESTION NO: 12

We were planning a surprise party for Margaret, but she walked in on our discussion, so of course that rather let the cat out the bag.

A. so of course that rather let the cat out the bag

B. so of course that rather let the cat out on the bag

C. so of course that rather let the cat out in the bag

D. so of course that rather let the cat out of the bag

E. so of course that rather let the cat out off the bag

ANSWER: D

Explanation:

The correct completion is “so of course that rather let the cat out of the bag.” “Let the cat out of the bag” is a fixed English idiom meaning to reveal a secret, often accidentally. In this sentence, Margaret unexpectedly hears the discussion about the surprise party. Because the party can no longer remain unknown to her, the secret has been disclosed, which is exactly the meaning conveyed by the idiom. The preposition “of” is an essential part of the established expression: the metaphor suggests that once a cat has been released from a bag, it cannot realistically be put back and concealed again. Using the complete conventional idiom also makes the sentence clear, natural, and grammatically correct in standard written English. This phrase is recorded by major dictionaries as an idiom meaning to disclose confidential information or reveal a secret. See Cambridge Dictionary: “let the cat out of the bag” and Merriam-Webster: “let the cat out of the bag”.

QUESTION NO: 13

Sebastian purchased a brand new car three years ago for $35,000. The following year its value was estimated at $23,850, and the year after that the price dropped to $20,400.

Approximately what was the percentage change in the value of Sebastian’s vehicle between one year and two years after its purchase?

A. −42%

B. 86%

C. −14%

D. 14%

ANSWER: C

Explanation:

The correct answer is **−14%**. The question asks for the change from one year after purchase to two years after purchase, so the relevant starting value is $23,850 and the later value is $20,400. First, find the dollar change: $20,400 − $23,850 = −$3,450. The negative result shows that the vehicle’s value decreased during that one-year interval. Next, calculate percentage change by dividing the change by the original value for the interval: −$3,450 ÷ $23,850 ≈ −0.1447. Converting the decimal to a percentage gives approximately −14.47%, which rounds to −14%. The base value must be the value at one year, rather than the original purchase price, because percentage change is measured relative to the beginning of the specified period. This approach follows the standard percentage-change formula: (new value − original value) ÷ original value × 100. See Khan Academy’s percent-change guidance and Britannica’s overview of percentages.

QUESTION NO: 14

Whole-hearted participation from the employees is the only measure by which we can determine if the initiatives are working.

A. participation from the employees is an only measure by

B. participation from the employees is the only measure by

C. participation from the employees has the only measure by

D. participation from the employees has only measure by

E. participation from the employees were the only measure by

ANSWER: B

Explanation:

“participation from the employees is the only measure by” is correct because the sentence’s subject is *participation*, which is a singular noun. Therefore, the singular verb *is* correctly agrees with that subject. The prepositional phrase *from the employees* describes participation but does not change the number of the subject. The phrase *the only measure* is also appropriately definite: it identifies one specific standard used to determine whether the initiatives are working. Finally, *by which* correctly introduces a relative clause explaining the means or standard used for making that determination: “the measure by which we can determine...” This construction is clear, complete, and grammatically sound. Subject–verb agreement depends on the grammatical head of the subject phrase rather than on a noun contained in a modifying prepositional phrase, as explained by the Purdue Online Writing Lab’s subject–verb agreement guidance. For further discussion of forming clear and complete sentences with appropriate agreement, see the University of North Carolina Writing Center.

QUESTION NO: 15

The athlete's insistence on self-discipline had become _____; rarely, it seemed, did he allow himself even a minor indulgence.

A. dilatory

B. obsessive

C. spontaneous

D. infectious

E. unemotional

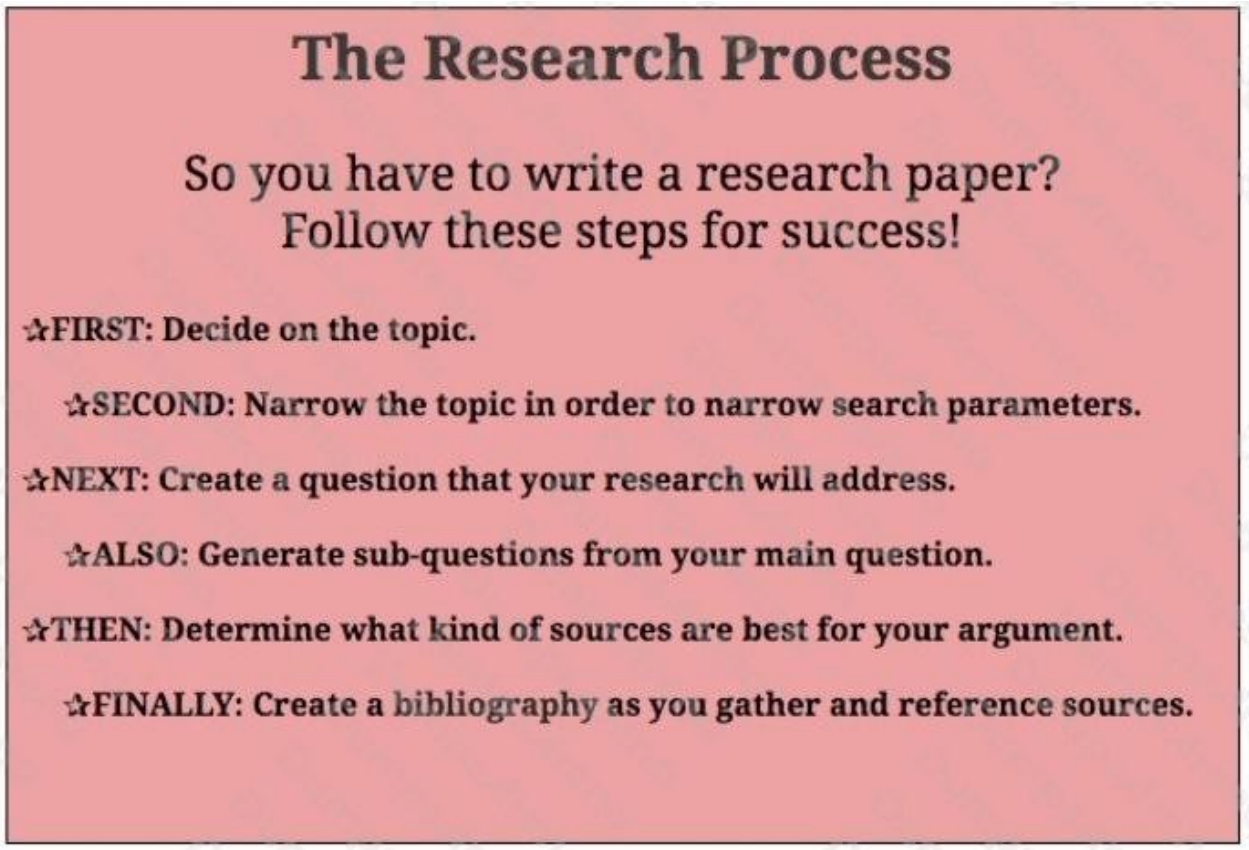
ANSWER: B

Explanation:

obsessive is correct because the sentence describes self-discipline that has become unusually intense and consuming. The key contextual clue is that the athlete “rarely” permits even a “minor indulgence.” This goes beyond ordinary determination or healthy training habits: it suggests a persistent, excessive preoccupation with maintaining control over his behavior. In this context, *obsessive* precisely conveys an attitude characterized by fixation and an inability or unwillingness to relax standards, even in small ways.

The sentence’s semicolon also links the general statement about his insistence on self-discipline to the specific evidence that follows. His near-total refusal to allow minor pleasures demonstrates that his discipline is not merely consistent; it has become extreme. Major dictionaries define *obsessive* in terms of excessive preoccupation with an idea, activity, or concern, which matches the athlete’s rigid avoidance of indulgence. See the Merriam-Webster definition of “obsessive” and the Cambridge Dictionary entry.

QUESTION NO: 16



Based on the poster, when should you create your bibliography for a research paper?

A. after choosing your topic and narrowing the focus

B. at the end, after completing your paper

C. as you brainstorm for topic ideas

D. as you find sources and reference material

ANSWER: D

Explanation:

The correct answer is **"as you find sources and reference material"** because a bibliography is an ongoing record of the sources consulted and used during research. Creating entries as each source is found allows a writer to capture essential citation details while they are readily available, including the author, title, publication date, publisher, page numbers, database, and stable URL or DOI when applicable. This practice also makes it easier to distinguish reliable, relevant sources from materials that will not ultimately be used.

Maintaining the bibliography throughout the research process supports accurate attribution and helps prevent accidental plagiarism. It also saves time during drafting and revision because the writer does not have to relocate every source or reconstruct incomplete publication information at the end of the project. Citation styles have specific formatting requirements, but all depend on complete source information. The Purdue Online Writing Lab recommends recording publication information as sources are located; see its research and citation resources. Guidance on documenting sources and avoiding plagiarism is also available from the Cornell University Library citation guide.

QUESTION NO: 17

Which of these words becomes an irregular plural?

A. mouse

B. elephant

C. lounge

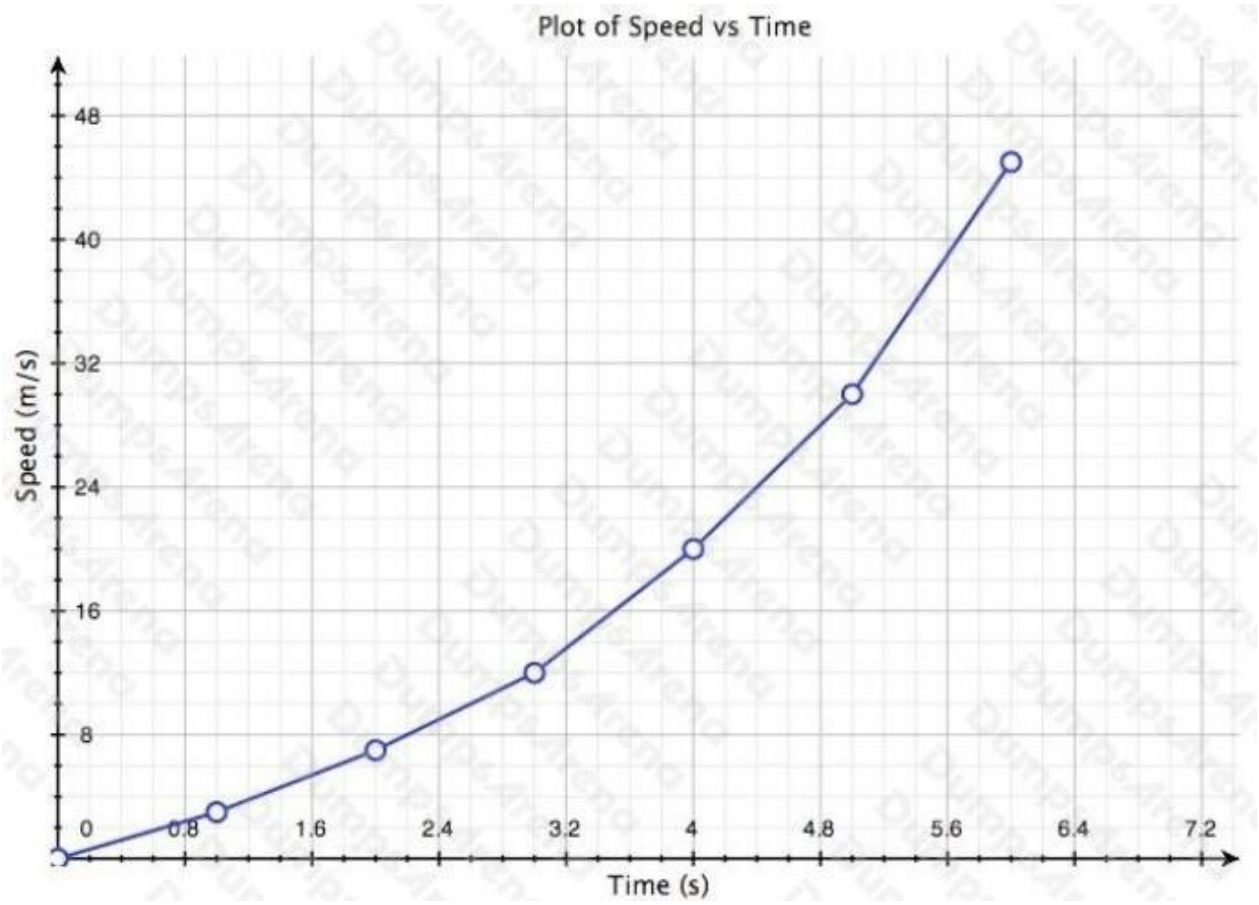
D. chair

ANSWER: A

Explanation:

The correct answer is **mouse**, because its plural form is **mice**. This is an irregular plural: rather than adding the usual plural ending *-s* or *-es*, the word changes internally from *ou* to *i*. Irregular plurals are forms that must be learned individually because they do not follow the standard spelling pattern used for most English nouns. The change from *mouse* to *mice* reflects an older English pattern in which a change in a vowel sound indicated plurality. Modern English retains this pattern in a small group of common nouns, including forms such as *man/men* and *tooth/teeth*. Recognizing *mice* as the plural of *mouse* demonstrates knowledge of standard English noun forms, an important grammar skill for reading and sentence-correction questions. Merriam-Webster lists *mice* as the plural of *mouse*: Merriam-Webster Dictionary: mouse. For additional guidance on forming plural nouns, see Purdue OWL grammar resources.

QUESTION NO: 18



The figure shows a graph of the speed of a test vehicle, plotted every second for 6 seconds during an experiment.

Which of the following statements best describes the motion of the vehicle during this time?

A. The vehicle starts by moving slowly and continues to pick up speed during the entire time.

B. The vehicle slows down at first, then picks up speed during the last 2 seconds of the time measured.

C. The vehicle is moving rapidly at the start of measurement and slows down to a stop at the end.

D. The vehicle moves at the same speed the entire time.

ANSWER: A

Explanation:

The vehicle starts by moving slowly and continues to pick up speed during the entire time. This conclusion follows from the speed graph because the plotted speed values rise as time progresses from the beginning of the six-second interval to the end. A speed-versus-time graph shows how fast an object is moving at each recorded moment; therefore, higher points on the graph represent greater speed. Since the graph begins at a relatively low speed and increases at each successive measurement, the vehicle is continually gaining speed throughout the experiment. In physical-science terms, the vehicle has positive acceleration over this interval because its speed is increasing with time. The graph does not merely show the vehicle changing position; it specifically supplies speed measurements, so its upward trend directly describes an increase in how rapidly the vehicle moves. This is consistent with the interpretation of motion graphs described by The Physics Classroom and the general definition of acceleration as a change in velocity over time from OpenStax Physics.

QUESTION NO: 19

What happens when a piece of zinc is placed in a copper(II) sulphate solution?

A. Zinc displaces copper from copper(II) sulphate solution. The original blue color of the solution persists.

B. Sulphur dioxide is liberated.

C. Zinc displaces copper from copper(II) sulphate solution.

D. No reaction occurs because zinc is less reactive metal than copper.

ANSWER: C

Explanation:

Zinc displaces copper from copper(II) sulphate solution. Zinc is higher than copper in the metal reactivity series, so zinc atoms readily lose electrons and enter the solution as zinc ions. At the same time, copper(II) ions gain those electrons and are converted into copper metal. This is a displacement reaction and also a redox reaction. The overall ionic change is $Zn(s) + Cu^{2+}(aq) \rightarrow Zn^{2+}(aq) + Cu(s)$. In an experiment, a reddish-brown coating of copper forms on the zinc surface. As the copper(II) ions are removed from the solution, its characteristic blue colour becomes progressively less intense; the remaining solution contains zinc sulphate, which is colourless. This behavior follows the principle that a more reactive metal can displace a less reactive metal from a solution of its salt. The Royal Society of Chemistry discusses metal displacement reactions and their relation to the reactivity series at RSC: Displacement reactions between metals and their salts. A related explanation of oxidation and reduction in metal displacement is available from BBC Bitesize: Reactivity series and displacement reactions.

QUESTION NO: 20

Which of these expresses 33/80 as a decimal?

A. 0.345

B. 0.4125

C. 4.125

D. 0.0412

ANSWER: B

Explanation:

0.4125 is the decimal equivalent of 33/80. A fraction represents division, so the numerator, 33, is divided by the denominator, 80. Since 80 goes into 330 four times, the decimal begins with 0.4; this accounts for 32 of the 33 units, leaving 1 unit still to

divide. Continuing the division produces 0.0125 from that remaining 1/80. Combining these values gives 33/80 = 0.4 + 0.0125 = 0.4125.

The result can also be checked by multiplication: 0.4125 × 80 = 33. Because multiplying the proposed decimal by the original denominator reconstructs the numerator exactly, 0.4125 is the correct representation. Decimal conversion is based on the relationship that a fraction's bar means division, and a terminating decimal is obtained when that division ends with no remainder. For additional guidance on converting fractions to decimals, see Khan Academy's fraction-to-decimal lesson and Math Is Fun's conversion guide.

QUESTION NO: 21

The union should have a library and a recording room, an institute to train youngsters, and offer pension to old musicians in need.

A. library and a recording room, an institute to train youngsters, and offer pension to old musicians

B. library, a recording room and an institute to train youngsters, and offer pension to old musicians

C. library and a recording room, and an institute to trait youngsters, and offer pension to old musicians

D. library, a recording room, an institute to train youngsters, and offer pension to old musicians

E. library, a recording room, an institute to train youngsters, offer pension to old musicians

ANSWER: D

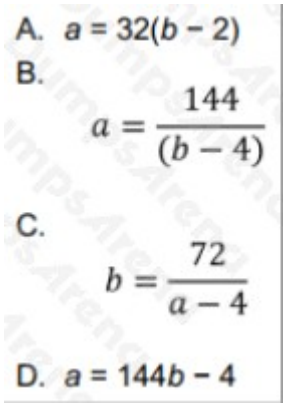
Explanation:

"library, a recording room, an institute to train youngsters, and offer pension to old musicians" is correct because it presents the union's proposed services in a clear, consistently punctuated series. The first three items are things the union should have: a library, a recording room, and an institute to train youngsters. The final item, "offer pension to old musicians," is an action governed by the modal verb "should." Repeating the article "a" before each of the three facilities makes each noun phrase distinct and easy to read. Separating the items with commas also prevents a reader from mistakenly treating "library and a recording room" as one combined item rather than two separate facilities. The coordinating conjunction "and" appropriately introduces the final element of the series, connecting the facilities the union should have with the support it should offer. This construction follows standard guidance for commas in a series and supports parallel, readable sentence structure. See the Purdue OWL guidance on commas in series and the Purdue OWL overview of parallel structure.

QUESTION NO: 22

a is inversely proportional to (b − 4).

If a = 8 and b = 22, express a in terms of b.



A. Option A

B. a = 144/(b − 4)

C. Option C

D. Option D

ANSWER: B

Explanation:

The correct expression is **a = 144/(b − 4)**. If a quantity is inversely proportional to an expression, it can be written as a constant divided by that expression. Here, “a is inversely proportional to (b − 4)” gives the relationship **a = k/(b − 4)**, where k is a constant of proportionality. Using the stated values, substitute a = 8 and b = 22: 8 = k/(22 − 4) = k/18. Multiplying both sides by 18 gives k = 144. Replacing k with 144 produces a = 144/(b − 4). This equation also reproduces the supplied values: when b is 22, the denominator is 18, and 144 ÷ 18 equals 8. The shift inside the denominator is essential because the inverse relationship is with b − 4, rather than with b alone. For a review of inverse variation and finding its constant from a known pair of values, see Khan Academy’s direct and inverse variation overview and OpenStax Elementary Algebra.

QUESTION NO: 23

Which of these publications is not an example of fact-based work?

A. scientific journal

B. instruction manual

C. medical studies content

D. editorial content

ANSWER: D

Explanation:

Editorial content is the correct answer because an editorial is primarily a form of opinion writing. Its central purpose is to present a writer’s or publication’s viewpoint, interpretation, judgment, or argument about an issue. Although a well-written editorial may cite accurate evidence and verifiable events to support its position, the work itself is not defined chiefly by neutral presentation of facts. Instead, it seeks to persuade readers or influence how they think about a topic.

In reading-comprehension questions, recognizing an editorial’s purpose helps distinguish fact-based material from opinion-based material. Signals may include evaluative language, recommendations, claims about what should happen, and arguments supported by selected evidence. The Society of Professional Journalists describes editorial content as distinct from news reporting and emphasizes the importance of clearly separating news from advertising and opinion. The Poynter Institute likewise explains the role of opinion journalism in providing analysis, commentary, and argument rather than simply reporting events. See the Society of Professional Journalists Code of Ethics and Poynter’s ethics and trust resources.

QUESTION NO: 24

Read the paragraph and select the sentence or sentences that do not logically fit.

"Dog breeds vary widely and there are many factors to consider when deciding which breed is right for your family.

Common factors to consider include energy level, trainability, and maintenance. Energy level refers to how much your future dog may want or need to run, play, and train. Dogs of higher intelligence, such as the German Shepherd, tend to have high energy levels and therefore would not be a good fit for an owner who loves to relax on the couch after work.

When it comes to trainability, not all dogs are equal. Some thrive on learning new tricks, while others, such as the Shih Tzu, may take a while to learn simple commands.

It is a good idea to prepare your home for a new puppy before bringing them inside. Puppies are curious by nature and will find lots of things to chew and eat if you allow them.

Finally, maintenance is a key component when owning any dog, but some are more work than others. If you can't stand shedding or fur on the sofa, consider a Poodle or a designer Poodle mix, who don't shed at all and have hypoallergenic coats.

Taking these important differences into account will ensure a healthy, happy relationship between you and your new dog. Regardless of the breed you choose, remember that there is nothing more satisfying than the bond between a human and their dog."

A. Dog breeds vary widely and there are many factors to consider when deciding which breed is right for your family.

B. If you can't stand shedding or fur on the sofa, consider a Poodle or a designer Poodle mix, who don't shed at all and have hypoallergenic coats.

C. Regardless of the breed you choose, remember that there is nothing more satisfying than the bond between a human and their dog.

D. It is a good idea to prepare your home for a new puppy before bringing them inside. Puppies are curious by nature and will find lots of things to chew and eat if you allow them.

ANSWER: D

Explanation:

"It is a good idea to prepare your home for a new puppy before bringing them inside. Puppies are curious by nature and will find lots of things to chew and eat if you allow them." does not logically fit because the paragraph's controlling purpose is to help a prospective owner compare dog breeds. It introduces three specific breed-selection criteria—energy level, trainability, and maintenance—and then develops each criterion with an example. The selected sentences shift instead to puppy-proofing a home, which is general preparation advice that applies after a person has chosen to get a puppy; it does not help compare one breed's characteristics with another's. Although home preparation is relevant to responsible dog ownership, relevance alone is not enough for paragraph unity. Effective paragraphs maintain focus by ensuring that each supporting idea develops the stated central idea or topic sentence. Here, the surrounding discussion returns directly to maintenance needs and ends by referring to "these important differences," confirming that breed differences—not household safety preparation—are the intended focus. Guidance on maintaining paragraph unity and supporting a controlling idea is available from the Purdue Online Writing Lab and the UNC Writing Center.

QUESTION NO: 25

Read the sentences and choose which one would probably be seen in an academic journal.

A. The driver reportedly ran a red light before crashing into the post office, nearly hitting several bystanders. Police are still searching for the vehicle and the driver, and request that anyone with further information come forward immediately.

B. While the control group experienced no difference in behavior, the changes within the test group were substantial. Scientists could only assume that the hypothesis was viable.

C. Sophia lay on her hammock and watched the birds flying among the large magnolia trees. She sighed, wishing she were as carefree as the birds.

D. Unlike other soaps, Squeaky Clean leaves your skin impeccably clean and smooth, without overdrying or irritating it. If you don't believe us, you'll just have to try it for yourself.

ANSWER: B

Explanation:

"While the control group experienced no difference in behavior, the changes within the test group were substantial. Scientists could only assume that the hypothesis was viable." is the sentence most likely to appear in an academic journal because it uses the language and structure of scientific research. It identifies a control group and a test group, compares observed behavioral outcomes, and connects those observations to a hypothesis. These are central features of academic reporting, particularly in experimental studies: researchers describe a study's groups, summarize results, and cautiously interpret what the results may indicate. The phrase "could only assume" also reflects an appropriately tentative approach to a conclusion, rather than presenting the result as unquestionable fact. Academic writers generally distinguish between evidence collected

during a study and the conclusions that evidence can reasonably support. Clear reporting of methods, comparison groups, results, and interpretations helps readers assess the study's claims. Guidance on academic style and evidence-based argument is available from the UNC Writing Center's scientific reports guide and the Purdue OWL research-writing resources.

QUESTION NO: 26

What is the purpose of a footnote?

A. to refer to another point in the text

B. to provide additional commentary or a reference

C. to provide a space for reader commentary

D. to refer back to another chapter in the work

ANSWER: B

Explanation:

A footnote is a note placed at the bottom of a page that supplies supplementary information connected to a specific word, statement, or idea in the main text. Its purpose is to provide additional commentary or a reference without interrupting the flow of the writing. For example, an author may use a footnote to identify the source of a quotation, cite research supporting a claim, define a term, or add a brief clarification that would be distracting if included in the paragraph itself. A superscript number in the text directs the reader to the corresponding numbered note at the bottom of that page. This system helps writers document sources clearly and allows readers to locate supporting information efficiently. The Chicago Manual of Style citation guide describes notes as a method for citing sources, while the Purdue OWL Chicago style guide explains how notes can provide source documentation and related information.

QUESTION NO: 27

The oil is transported via a pipeline that runs north-south no Alaska to port of Valdez.

A. that runs north-south on Alaska lo port

B. that runs north-south in Alaska to port

C. that runs north-south to Alaska to port

D. that runs north-south into Alaska to port

E. that runs north-south across Alaska to the port of Valdez

ANSWER: E

Explanation:

"that runs north-south across Alaska to the port of Valdez" is correct because *across* precisely expresses a route that extends from one side or area of Alaska through or over its expanse. A north–south oil pipeline is a linear structure that traverses the state geographically, so describing it as running north–south *across Alaska* clearly communicates its path. The phrase also properly identifies the destination as "the port of Valdez," completing the sentence with a specific, grammatical destination.

In standard English, *across* commonly indicates movement, extension, or placement from one side of an area to another. Merriam-Webster defines *across* in part as "from one side to the other of," which fits a pipeline spanning a broad land area such as Alaska. See Merriam-Webster's definition of across. The real Trans-Alaska Pipeline System also provides the relevant geographic context: it carries oil from Prudhoe Bay in northern Alaska to Valdez in southern Alaska. The system's route is described by Alyeska Pipeline Service Company at Pipeline Facts. Thus, "across Alaska" is the most accurate and idiomatic wording for the pipeline's north-to-south route.

QUESTION NO: 28

Pete, Dan, and Carlyle had to dig a 2-foot deep trench to run conduit to their garage so they could wire it for electricity. To share the work, each agreed to dig 1/3 of the way from the house to the garage. Dan went first and dug 1/9 of the total distance early the next morning.

What fraction of the total amount of work did Dan still need to complete?

A. 2/3

B. 2/9

C. 3/9

D. 8/9

ANSWER: B

Explanation:

2/9 is correct because Dan's assigned share of the trench is **1/3** of the total distance, while he has already completed **1/9** of the total distance. To find the amount still remaining in Dan's own share, subtract the completed portion from the assigned portion: 1/3 − 1/9. Rewrite 1/3 using ninths: 1/3 = 3/9. Dan therefore has 3/9 − 1/9 = 2/9 of the entire trench left to dig. The stated depth does not change this fraction because each person is sharing the same trench work at the same depth; the relevant comparison is the portion of the total distance. This calculation distinguishes the work Dan has already done from the work he was responsible for completing. For a review of finding equivalent fractions before subtraction, see Khan Academy's fraction lesson. A broader reference on fraction operations is available from OpenStax Prealgebra.

QUESTION NO: 29

Read the passage and correct the number 15 underlined words or phrases.

Danny and Carla (1) were being married for two years. For (2) there honeymoon, they (3) had gone to the Grand Cayman Island for a nice, relaxing vacation at a luxury beach resort. But their honeymoon turned out to be anything but relaxing.

When (4) they were arriving at the airport, they hailed a taxi. The taxi driver strapped the suitcases to the top of the car and sped off towards the resort. Along the way, the taxi driver swerved (5) to avoid hit a cat on the road. This caused (6) Carla' suitcase to fly off the car and crash in the road. Her clothes, shoes, and personal items (7) had flown everywhere. She yelled (8) anger at the driver to stop immediately. Danny and Carla rushed out of the cab to gather her belongings. Once they collected everything they (9) can find, they started again for the resort. When they finally arrived, the driver charged them for the time spent collecting the things on the road. Irate, Danny made sure not to tip him. Exhausted, Danny and Carla checked into their room.

When they got to the room, they noticed they did not have a beachfront view as they (10) had been promised. They were also in a smoking room even though they had requested a non-smoking room. Danny asked to switch rooms, but the concierge (11) apollageticaly replied that they were booked for the rest of the week. (12) "Its a popular week for tourists, sir," she replied. Nothing (13) could be done.

Danny, (14) that was trying to stay positive, told Carla not to worry. As long as they kept the windows open, the smell of cigarettes would not be (15) to much of a bother. The next day, they (16) waked up early to fish and then go to the beach. They walked (17) at the beach and found a small table, two chairs, and a large umbrella. Then, they rented a boat to fish. Carla caught only one fish, but Danny (18) catched several fishes. When they got back, they took a nap on the beach. They finally felt peaceful.

A few minutes later, a large family with six kids took a space right next to them. The kids were loud. Some of the kids were arguing, while some ran around squealing in delight. Danny and Carla were unable to sleep, so Danny suggested they (19) went for a walk together. Not paying attention to where they were walking, Carla suddenly jumped up and screamed in agony. She had stepped on a jellyfish and (20) had got stung. She was in pain and couldn't walk, so Danny (21) had carried her all the way back to the room.

Back (22) into the room, Danny (23) realizing they had left their things at the beach. Just as he was about to get them, it started to (24) poor. Danny hoped the umbrella would keep their things dry, but the wind (25) was knocked the umbrella over

and everything (26) were soaked. Their books, phones, and wallet (27) was ruinned. To make matters worse, the rain didn't stop.

Two days (28) went by. They had to stay in their smelly room, Carla was still in pain, and Danny was in a bad mood. Needless to say, they (29) gone home early. They thought they might be able to get their money back from the travel agent, but that was also (30) unsuccessfull.

A. soo

B. no change

C. two

D. too

ANSWER: D

Explanation:

The correct correction is “too” because the intended phrase is “too much of a bother.” In this construction, *too* is an adverb that modifies *much* and indicates an excessive degree: the cigarette smell would not be excessively bothersome if the windows remained open. The phrase “too much” is a standard degree expression, similar to “too cold,” “too noisy,” or “too difficult.” It communicates that something exceeds a comfortable, acceptable, or desired amount. Here, “much” cannot be modified by the preposition *to*; the preposition would not form a grammatical phrase before “much of a bother.” The spelling *two* is reserved for the number 2, so it does not fit this meaning. Correct use of commonly confused words such as *to*, *too*, and *two* is an important editing skill because pronunciation alone does not identify the proper spelling. Merriam-Webster defines *too* as meaning “more than is needed, wanted, or acceptable,” which precisely matches its role in this sentence. See Merriam-Webster’s entry for “too” and the Purdue OWL grammar resources.

QUESTION NO: 30

The grave problems that affected him were the purely _____ ones of hunger, pain and fatigue.

A. physical

B. imaginary

C. irrelevant

D. hereditary

E. coincidental

ANSWER: A

Explanation:

The correct completion is “physical” because hunger, pain, and fatigue are conditions experienced in the body. Hunger is a physiological need for food, pain is a bodily sensation that signals injury or illness, and fatigue is physical or mental exhaustion; in this sentence, their grouping emphasizes immediate bodily suffering. The phrase “purely physical ones” creates a clear contrast between bodily hardships and problems that might be emotional, social, financial, or intellectual. Grammatically, “physical” also functions naturally as an adjective modifying “ones,” which stands for “problems.” The sentence therefore means that the person’s serious difficulties consisted specifically of bodily needs and discomforts: hunger, pain, and fatigue. Standard dictionary definitions support this usage: Merriam-Webster defines “physical” as relating to the body, while Cambridge Dictionary includes meanings connected with the body rather than the mind. See Merriam-Webster: physical and Cambridge Dictionary: physical.

QUESTION NO: 31

A positive environment leads to great employee satisfaction whereas negative one mars employee performance.

A. leads to great employee satisfaction whereas negative

B. leads to greater employee satisfaction whereas negative

C. leads to greatest employee satisfaction whereas negative

D. leads to grater employee satisfaction whereas negative

E. leads to be great employee satisfaction whereas negative

ANSWER: B

Explanation:

“leads to greater employee satisfaction whereas negative” is correct because *greater* is the comparative form needed to express the implied comparison between the outcomes associated with a positive environment and those associated with a negative environment. The sentence sets up two contrasting workplace conditions through *whereas*: a positive environment produces a more favorable level of employee satisfaction, while a negative environment harms performance. Using the comparative adjective makes that relationship precise and gives the first clause a clear comparative meaning.

In formal English, comparative adjectives are used when the context compares two conditions, groups, or results; the second item being compared can be stated directly or understood from the surrounding sentence. Here, “negative one” refers back to “environment,” supplying the contrasting condition. The noun phrase “employee satisfaction” also works naturally with the comparative adjective “greater,” since satisfaction is treated as an amount or degree that can increase. For guidance on comparative forms and their use in comparisons, see the Purdue Online Writing Lab’s adjective and adverb guidance and the Cambridge Dictionary grammar guide on comparative adjectives.

QUESTION NO: 32

Mary is x years old. She is 6 years older than her twin brothers Sam and Paul.

What is the mean age of the three children?

A. x − 2

B. x − 3

C. x − 4

D. x + 4

ANSWER: C

Explanation:

x − 4 is correct. Mary’s age is represented by *x*. Because she is 6 years older than each twin brother, each brother’s age is *x − 6*. Since Sam and Paul are twins, they have the same age. The total of all three ages is therefore *x + (x − 6) + (x − 6)*, which simplifies to *3x − 12*. The mean is found by dividing this total by the number of children, which is 3: *(3x − 12) ÷ 3 = x − 4*. This expression represents the average age of Mary, Sam, and Paul. The calculation uses the standard definition of arithmetic mean: add all values in a data set and divide by the number of values. For a review of finding averages, see Khan Academy’s lesson on mean, median, and mode. For further guidance on translating verbal statements into algebraic expressions, see OpenStax Elementary Algebra.

QUESTION NO: 33

Although the colonist resented the new British laws, they _____ them as long as England did not _____ them too strenuously.

A. rejected; define

B. amended; follow

C. tolerated; enforce

D. defied; interpret

E. welcomed; observe

ANSWER: C

Explanation:

"tolerated; enforce" correctly completes the sentence because it creates a logical contrast after "although." To resent laws is to feel bitterness, annoyance, or opposition toward them; nevertheless, people may still tolerate laws when circumstances make active resistance unnecessary or undesirable. "Tolerated" means that the colonists endured or put up with the laws despite their resentment. This meaning fits the concessive relationship signaled by "although": their feelings toward the laws were negative, but their behavior was restrained acceptance rather than immediate rebellion.

The second blank requires a verb describing what England would do to laws. A governing authority enforces laws by compelling compliance with them. The phrase "did not enforce them too strenuously" means that England did not apply the laws with excessive rigor. That condition explains why the colonists could continue to tolerate laws they disliked: limited or less aggressive enforcement would reduce the laws' practical burden. Thus, the two words work together to express resentment paired with reluctant endurance, conditioned on moderate governmental enforcement. Definitions and usage support these meanings: Merriam-Webster: tolerate and Merriam-Webster: enforce.

QUESTION NO: 34

As a people, the Aztecs were full of contradictions; _____ and yet prizing humility, _____ and yet obliging and kind.

A. arrogant; benevolent pious;

B. gallant provincial;

C. sullen tolerant;

D. competitive proud;

E. implacable

F. arrogant; implacable

ANSWER: F

Explanation:

The sentence requires two adjectives that establish contrasts with the qualities following *and yet*. "Arrogant; implacable" completes both contrasts clearly and preserves the parallel structure of the sentence: the Aztecs could be arrogant while also valuing humility, and they could be implacable while also being obliging and kind. *Arrogant* means displaying an exaggerated sense of one's own importance, which directly contrasts with the modesty implied by prizing humility. Merriam-Webster defines *arrogant* as having or showing an insulting attitude of superiority; see Merriam-Webster's definition of arrogant. *Implacable* means not able to be appeased or changed, expressing a stern, unyielding quality that creates the intended tension with being accommodating and kind. Its meaning is documented in Merriam-Webster's definition of implacable. The semicolon separates the two parallel contradictory descriptions, so a complete answer must supply one suitable adjective for each blank.

QUESTION NO: 35

Read the passage and correct the number 14 underlined words or phrases.

Danny and Carla (1) were being married for two years. For (2) there honeymoon, they (3) had gone to the Grand Cayman Island for a nice, relaxing vacation at a luxury beach resort. But their honeymoon turned out to be anything but relaxing.

When (4) they were arriving at the airport, they hailed a taxi. The taxi driver strapped the suitcases to the top of the car and sped off towards the resort. Along the way, the taxi driver swerved (5) to avoid hit a cat on the road. This caused (6) Carla' suitcase to fly off the car and crash in the road. Her clothes, shoes, and personal items (7) had flown everywhere. She yelled (8) anger at the driver to stop immediately. Danny and Carla rushed out of the cab to gather her belongings. Once they collected everything they (9) can find, they started again for the resort. When they finally arrived, the driver charged them for the time spent collecting the things on the road. Irate, Danny made sure not to tip him. Exhausted, Danny and Carla checked into their room.

When they got to the room, they noticed they did not have a beachfront view as they (10) had been promised. They were also in a smoking room even though they had requested a non-smoking room. Danny asked to switch rooms, but the concierge (11) apollageticaly replied that they were booked for the rest of the week. (12) "Its a popular week for tourists, sir," she replied. Nothing (13) could be done.

Danny, (14) that was trying to stay positive, told Carla not to worry. As long as they kept the windows open, the smell of cigarettes would not be (15) to much of a bother. The next day, they (16) waked up early to fish and then go to the beach. They walked (17) at the beach and found a small table, two chairs, and a large umbrella. Then, they rented a boat to fish. Carla caught only one fish, but Danny (18) catched several fishes. When they got back, they took a nap on the beach. They finally felt peaceful.

A few minutes later, a large family with six kids took a space right next to them. The kids were loud. Some of the kids were arguing, while some ran around squealing in delight. Danny and Carla were unable to sleep, so Danny suggested they (19) went for a walk together. Not paying attention to where they were walking, Carla suddenly jumped up and screamed in agony. She had stepped on a jellyfish and (20) had got stung. She was in pain and couldn't walk, so Danny (21) had carried her all the way back to the room.

Back (22) into the room, Danny (23) realizing they had left their things at the beach. Just as he was about to get them, it started to (24) poor. Danny hoped the umbrella would keep their things dry, but the wind (25) was knocked the umbrella over and everything (26) were soaked. Their books, phones, and wallet (27) was ruinned. To make matters worse, the rain didn't stop.

Two days (28) went by. They had to stay in their smelly room, Carla was still in pain, and Danny was in a bad mood. Needless to say, they (29) gone home early. They thought they might be able to get their money back from the travel agent, but that was also (30) unsuccessfull.

A. no change

B. whose

C. who

D. which

ANSWER: C

Explanation:

who is correct because the clause identifies Danny as the person performing the action “was trying to stay positive.” A relative pronoun connects a descriptive clause to its antecedent, the noun it describes. Here, the antecedent is “Danny,” a person, so *who* is the appropriate subject relative pronoun. The resulting sentence reads: “Danny, who was trying to stay positive, told Carla not to worry.” The commas show that “who was trying to stay positive” is supplementary information about Danny rather than information needed to identify which Danny is meant. Within that clause, *who* functions as the subject of the verb phrase “was trying.” Standard English usage generally reserves *who* and *whom* for people, while *whose* expresses possession. This use follows standard guidance for relative pronouns in clauses describing people. See the Purdue Online Writing Lab guide to relative pronouns and the Cambridge Dictionary explanation of relative pronouns.

QUESTION NO: 36

His _____ to succumb to flattery made him _____ to the of people who wished to take advantage of him.

A. immune; predilection

B. prejudicial; intentions

C. susceptibility; cajolery

D. resistant; blandishments

E. amenable; rejection

ANSWER: C

Explanation:

“Susceptibility; cajolery” correctly completes the intended meaning and grammar of the sentence. The phrase “his susceptibility to succumb” requires a noun after the possessive determiner “his.” *Susceptibility* means a tendency or vulnerability to be influenced, affected, or persuaded by something. Thus, the first part establishes that he was readily inclined to give in when someone flattered him.

Cajolery means persuasive flattery or coaxing, often used to influence another person. Because the people mentioned wish to take advantage of him, his tendency to yield to flattery would make him especially vulnerable to their cajolery. The completed sentence therefore conveys a clear cause-and-effect relationship: a person who is easily swayed by praise is an easy target for manipulative praise. This pairing also maintains parallel grammatical structure: a noun follows “His,” and a noun appropriately follows “the” in “the cajolery of people.” Definitions and usage align with standard dictionary entries for susceptibility and cajolery.

QUESTION NO: 37

Food moves in the gastrointestinal tract by which of these processes?

A. peristalsis of the circular and longitudinal muscles

B. peristalsis of the voluntary muscles.

C. voluntary waves of contraction

D. peristalsis of the longitudinal muscles only.

ANSWER: A

Explanation:

Food moves through most of the gastrointestinal tract by **peristalsis of the circular and longitudinal muscles**. Peristalsis is an involuntary, coordinated series of contractions and relaxations in the muscular wall of the digestive tract. The circular smooth-muscle layer contracts behind a bolus of food, narrowing the tube and helping push the material forward. At the same time, the longitudinal smooth-muscle layer shortens segments of the tract, which supports efficient forward propulsion. This coordinated action occurs from the esophagus through the intestines and is regulated primarily by the enteric nervous system and autonomic input rather than by conscious control. Peristalsis is essential because it advances swallowed food, stomach contents, and intestinal material through the tract so digestion and nutrient absorption can proceed. The U.S. National Library of Medicine describes peristalsis as the wave-like muscle contractions that move food through the digestive system: NCBI Bookshelf: Overview of Gastrointestinal Motility. Additional anatomical detail about the circular and longitudinal layers of the muscularis externa is available from NCBI Bookshelf: Anatomy, Abdomen and Pelvis, Small Intestine.

QUESTION NO: 38

Which of these is an example of incorrect capitalization?

A. Annie hoped to see the Brooklyn Bridge during her visit.

B. "Is it serious, Doctor?" the patient asked, her hands twisting in her lap.

C. Barack Obama, the President of the United States, gave an address last week.

D. President Barack Obama offered an address last week.

ANSWER: C

Explanation:

"Barack Obama, the President of the United States, gave an address last week." contains incorrect capitalization because *president* is being used as a descriptive title after a person's name, rather than as part of the name or as a title immediately before it. In this construction, the title is an appositive: it supplies additional information about Barack Obama. General capitalization conventions call for titles to be lowercase when they follow a name or are used descriptively. The sentence should therefore read, "Barack Obama, the president of the United States, gave an address last week." This rule helps readers distinguish a formal title used directly with a person's name from an ordinary descriptive noun. For example, *President Barack Obama* capitalizes the title because it appears directly before the name and functions as part of the name phrase. The capitalization guidance in the Merriam-Webster capitalization rules and the MLA Style Center's capitalization guidance supports lowercasing titles when they follow names or are used in a general descriptive sense.

QUESTION NO: 39

What is the number a, if the result of adding a to 80 is the same as subtracting 2a from 272?

A. −64

B. 64

C. 192

D. 62

ANSWER: B

Explanation:

The correct answer is **64**. The statement translates directly into the equation $a + 80 = 272 - 2a$, because "adding a to 80" gives $a + 80$ and "subtracting 2a from 272" gives $272 - 2a$. To solve the equation while keeping the equality balanced, add $2a$ to both sides. This combines the variable terms on the left and produces $3a + 80 = 272$. Next, subtract 80 from both sides, giving $3a = 192$. Dividing both sides by 3 isolates the variable: $a = 64$. A quick substitution confirms the result: adding 64 to 80 gives 144, and subtracting twice 64, or 128, from 272 also gives 144. Since both expressions have the same value, 64 satisfies the condition in the question. This procedure follows the standard properties of equality used to solve one-variable linear equations: perform the same inverse operation on each side until the variable is isolated. For additional guidance, see Khan Academy's linear-equations resources and OpenStax's strategy for solving linear equations.

QUESTION NO: 40

The metric system is deliberately designed to be simple arithmetically and yet capable of _____ expansion as it becomes necessary to _____ new units of measure.

A. confusing; record

B. mathematical; memorize

C. rigid; discard

D. indefinite; invent

E. limited; correct

ANSWER: D

Explanation:

"indefinite; invent" correctly completes the sentence because the metric system, formally expressed through the International System of Units, is structured to scale through decimal prefixes and to accommodate additional named units when scientific

and practical needs arise. “Indefinite expansion” means that the system is not constrained to a permanently fixed, small collection of measurements: its coherent decimal structure can be extended to represent extremely large and extremely small quantities. The verb “invent” also fits the intended meaning and grammar. As new fields of study, technologies, or measurement needs develop, people may invent or establish new units or measurement conventions. This flexibility is a central practical strength of metric measurement, while the decimal relationships among prefixes keep conversions arithmetically straightforward. The International Bureau of Weights and Measures describes the SI as the internationally agreed measurement system and documents its units and prefixes in the SI Brochure. The U.S. National Institute of Standards and Technology likewise explains the decimal prefix system used to express quantities over a very broad range in its metric SI prefixes reference.

QUESTION NO: 41

Estimate the value of 30/0.049 correct to 1 significant figure.

A. 610

B. 612.2

C. 600

D. 612

ANSWER: C

Explanation:

The correct answer is **600**. Evaluating the division gives 30 ÷ 0.049 = 612.244… . To state this result correct to one significant figure, retain only the first nonzero digit, which is 6 in the hundreds position. The next digit is 1, so the leading 6 does not round up. Therefore, 612.244… rounds to 600 when expressed to one significant figure.

A zero written after a nonzero digit can be important as a placeholder because it preserves the size, or place value, of the rounded result. Here, 600 represents an answer in the hundreds range; it is not equivalent to 6. For an explicitly stated significant-figure count in formal scientific notation, the same value could be written as 6×10^2, which clearly shows one significant figure. This approach follows the standard rule that rounding is determined by examining the digit immediately to the right of the final retained significant digit. See the guidance on significant figures and rounding and the overview of significant figures.

QUESTION NO: 42

The bank will definitely give us a loan, but the burnings question is, will they let us have as much as we need?

A. but the burnings question is

B. but the question burning is

C. but the burning question is

D. but the question burnings is

E. but the burned question is

ANSWER: C

Explanation:

The correct phrasing is “but the burning question is.” In this idiom, *burning* is an adjective describing a question that is especially urgent, important, or demanding of an answer. The singular noun *question* needs an adjective in this position, and *burning* supplies that descriptive role naturally and grammatically. The sentence means that although receiving a loan is certain, the pressing unresolved issue is whether the bank will lend the full amount needed.

“The burning question” is an established English expression, commonly used when one particular issue is foremost in people’s minds. Dictionaries define *burning* in this figurative sense as expressing strong urgency or importance. See the Cambridge Dictionary entry for “burning” and the Merriam-Webster entry for “burning”. Using the conventional idiom also creates a clear logical transition after “but”: the loan itself is not in doubt; the amount available is the immediate concern.

QUESTION NO: 43

The area of one face of a cube is 49 square centimeters.

What is the total length of all its edges?

A. 48 cm

B. 98 cm

C. 112 cm

D. 84 cm

ANSWER: D

Explanation:

84 cm is correct. Every face of a cube is a square, so the area of one face is found by multiplying the side length by itself. If the face area is 49 square centimeters, the edge length is the square root of 49: $\sqrt{49} = 7$ centimeters. A cube has 12 edges in total, and all of those edges have the same length. Therefore, the combined length of its edges is 12×7 cm = 84 cm.

This problem uses the relationship between the area of a square and its side length: area = side². It then uses the defining geometric property of a cube that it has 12 congruent edges. The given square-centimeter unit describes area, but after finding the edge length and adding the lengths of all edges, the result is correctly expressed in centimeters. For a review of square area and square roots, see OpenStax Prealgebra: Simplify and Use Square Roots. For cube geometry terminology and properties, see Encyclopaedia Britannica: Cube.

QUESTION NO: 44

According to the paragraph, how can students locate tutors/tutoring services?

When faced with a difficult academic task, many students turn to tutors for assistance. Tutors range widely in specialty and cost, including tutors who focus exclusively on reading, and others who work in broad categories such as general math. Tutors may be found in variety of ways, including checking with your local school and seeking out prospective tutors online. When searching for a tutor, however, recognize that different specialties may incur additional fees or charges. When selecting a tutor, consider establishing a trial period to ensure personality types mesh well and services deliver what they promise.

A. seeking out help from the student’s school and searching for tutoring services online

B. seeking help online or seeking help from a trusted friend or family member

C. reliable tutors are only found through local school tutoring programs

D. seeking help from a trusted friend or family member and contacting the local schools for tutoring services

ANSWER: A

Explanation:

The correct answer is **seeking out help from the student’s school and searching for tutoring services online**. The paragraph directly identifies two ways students may find tutors: checking with a local school and seeking prospective tutors online. This answer accurately restates both of those explicitly stated methods without adding information that is not provided in the passage. In reading-comprehension questions that ask “According to the paragraph,” the answer must be supported by details in the text rather than by reasonable assumptions or common experiences. Here, the relevant sentence gives the

locations and methods students can use to begin their search: their local school and online sources. The surrounding details about tutors' specialties, fees, and trial periods provide additional guidance for choosing a tutor, but they do not change the two stated ways of locating tutoring services. This is an example of locating explicitly stated information, a core reading skill that involves identifying the passage's exact supporting details. See the ATI TEAS exam overview at ATI TEAS and general reading-skills guidance from Reading Rockets.

QUESTION NO: 45

Yesterday, Fatima trained for 6.25 hours, riding her bicycle under various conditions. During her workout, she managed to ride 114.75 miles total.

What was her average speed during this training session?

A. 18.36 miles per hour

B. 19.61 miles per hour

C. 21.00 miles per hour

D. 18.22 miles per hour

ANSWER: A

Explanation:

18.36 miles per hour is correct because average speed is found by dividing the total distance traveled by the total time spent traveling. Fatima covered 114.75 miles in 6.25 hours, so the calculation is 114.75 ÷ 6.25. To make the division easier, multiply both numbers by 100: 11,475 ÷ 625. This quotient is 18.36, so Fatima's average speed was 18.36 miles each hour. The unit is miles per hour because the distance measurement, miles, is divided by the time measurement, hours. This result represents her overall rate for the entire training session, even though her bicycle speed may have varied under the different conditions described. In rate problems, the relationship is distance = rate × time; rearranging it gives rate = distance ÷ time. As a quick check, multiplying 18.36 miles per hour by 6.25 hours gives 114.75 miles, which matches the stated total distance exactly. For additional practice with the distance, rate, and time relationship, see Khan Academy's distance-rate-time lesson and OpenStax's explanation of rates.

QUESTION NO: 46

The study crowds and groups is more than _____ in an _____ age characterized by interdependence and action.

A. academic; collective

B. difficult; intellectual

C. vigorous; assertive

D. Erudite; formal

E. general; specific

ANSWER: A

Explanation:

academic; collective correctly completes the sentence because both words fit the intended meaning and grammatical structure. Saying that the study of crowds and groups is "more than academic" means it is not merely a theoretical or classroom-based subject; it has practical importance for understanding how people behave, cooperate, organize, and act within society. This is especially appropriate when discussing crowds and groups, whose behavior can affect communities, institutions, public decisions, and collective action.

The phrase “a collective age” also fits the description that follows. *Collective* concerns people acting, existing, or being considered as a group. An age “characterized by interdependence and action” emphasizes the growing importance of relationships, shared responsibilities, and coordinated human activity. Together, the two terms create a coherent claim: studying groups matters beyond scholarship because modern life depends heavily on group connections and shared action.

This usage aligns with the dictionary meanings of academic, including relating to learning or theoretical study, and collective, meaning involving or shared by members of a group.

QUESTION NO: 47

Anger is often inevitable, yet what we deal with it can determine if it could result in disaster or yield a calm even positive outcome.

A. yet what we deal with it can determine if it could

B. yet who we deal with it can determine if it could

C. yet how we deal with it can determine if it could

D. yet which we deal with it can determine if it could

E. yet that we deal with it can determine if it could

ANSWER: C

Explanation:

“yet how we deal with it can determine if it could” is correct because *how* introduces a clause describing the manner in which people manage anger. In the sentence, “how we deal with it” functions as the subject of the verb phrase “can determine.” The meaning is clear and logical: the way a person responds to anger may influence whether the situation develops destructively or leads to a calm, positive result.

This construction is an embedded interrogative clause, sometimes called a noun clause. Such a clause can begin with *how* and serve as a noun-like unit within a larger sentence. Here, it answers the underlying question, “In what way do we deal with anger?” Rather than asking that question directly, the sentence uses the answer concept—“how we deal with it”—as the thing that has an effect. The verb remains singular, “can determine,” because the entire clause is treated as one subject. For guidance on clauses functioning as subjects, see the Cambridge Dictionary Grammar overview of clauses and sentences and the Purdue OWL grammar resources.

QUESTION NO: 48

The sententious woman finally relented, allowing Maria to walk to the pharmaceutical aisle.

What is the meaning of the word sententious?

A. accommodating and readily available to help

B. short-tempered and prone to random outbursts of anger

C. kind, courteous

D. given to moralizing, or exceedingly self-righteous

ANSWER: D

Explanation:

The correct meaning is “given to moralizing, or exceedingly self-righteous.” *Sententious* describes a person, manner, or statement that offers moral judgments in a pompous, preachy, or overly self-important way. The word often carries a negative tone: the person is not simply expressing a reasonable ethical view, but is doing so in a way that seems smug or excessively focused on lecturing others about proper behavior. In the sentence, describing the woman as sententious

suggests that she may have been acting judgmentally or delivering a moralizing lecture before she finally allowed Maria to go to the pharmaceutical aisle. This contextual tone supports the definition because “finally relented” implies that the woman had been unnecessarily strict, disapproving, or self-righteous beforehand. Merriam-Webster defines *sententious* as “given to or abounding in aphoristic moralizing,” and Cambridge Dictionary similarly describes it as expressing moral judgments in a way that is intended to make others feel guilty or to show one’s own moral superiority. See Merriam-Webster and Cambridge Dictionary.

QUESTION NO: 49

"Christine and Tom baked Uncle Bill some cookies."

Read this sentence and identify the direct object and the indirect object, respectively.

A. Christine and Tom; cookies

B. cookies; Christine and Tom

C. cookies; Uncle Bill

D. Uncle Bill; cookies

ANSWER: C

Explanation:

The correct answer is **cookies; Uncle Bill**. In the sentence, the action verb is “baked.” To find the direct object, ask what Christine and Tom baked. They baked “some cookies,” so “cookies” directly receives the action of the verb and is the direct object. To find the indirect object, ask for whom the cookies were baked. The cookies were baked for “Uncle Bill,” making “Uncle Bill” the indirect object. An indirect object commonly appears between an action verb and its direct object, especially when it identifies the person or thing that receives the direct object. The sentence can also be restated as “Christine and Tom baked some cookies for Uncle Bill,” which confirms that Uncle Bill is the recipient or beneficiary of the cookies. This distinction helps readers identify how the verb’s action is organized: the direct object names what was baked, while the indirect object names the person who received the benefit of that action. See Purdue OWL: Direct and Indirect Objects and Merriam-Webster: Direct and Indirect Objects.