

# High School Placement Test

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## Topic Break Down

| Topic                        | No. of Questions |
|------------------------------|------------------|
| Topic 1, Verbal Skills       | 322              |
| Topic 2, Quantitative Skills | 23               |
| Topic 3, Reading             | 291              |
| Topic 4, Mathematics         | 268              |
| Topic 5, Language Skills     | 34               |
| Total                        | 938              |

QUESTION NO: 1

Select the answer choice that is closest in meaning to the word in capital letters.

HARBINGER

- A. Probability
- B. Tactic
- C. Omen
- D. Vegetation
- E. Proposal

**ANSWER: C**

**Explanation:**

“Omen” is correct because a harbinger is a sign, signal, or forerunner indicating that something is about to happen. The word is often used for an event, condition, or person that gives advance notice of a future development. For example, darkening skies can be a harbinger of a storm, and the first robin of spring may be described as a harbinger of warmer weather. An omen likewise is a sign believed to foretell or indicate a future event, making it the closest available synonym in this context. Although “omen” can sometimes carry a stronger suggestion of prediction or superstition, it shares the central meaning of something that signals what is coming. Standard dictionary definitions support this relationship: Merriam-Webster defines “harbinger” as “something that foreshadows a future event,” while its definition of “omen” includes “an occurrence or phenomenon believed to portend a future event.” Thus, “Omen” most accurately captures the meaning of HARBINGER in this vocabulary question. See [Merriam-Webster: harbinger](#) and [Merriam-Webster: omen](#).

QUESTION NO: 2

Synonyms: Select the one word or phrase whose meaning is closest to the word in capital letters.

CHORTLE

- A. Preserve
- B. Laugh
- C. Deflate
- D. Understand
- E. Pen

**ANSWER: B**

**Explanation:**

“Laugh” is the correct answer because *chortle* means to laugh in a pleased, gleeful, or amused way. The word commonly describes a warm, often somewhat subdued laugh or chuckle that expresses delight. Although a chortle is more specific than every possible kind of laugh—it often suggests a satisfied or cheerful chuckle—the broader word “laugh” directly captures its essential meaning and is therefore the closest synonym provided. Major dictionaries define *chortle* as a joyful or pleased laugh, supporting this relationship. For example, Merriam-Webster defines it as “to laugh or chuckle especially when amused or pleased,” and Cambridge Dictionary similarly describes it as a happy, satisfied laugh. In a synonym question, the best choice is the term that retains the central action and feeling of the tested word. “Laugh” does that by identifying the vocal expression of amusement or pleasure conveyed by *chortle*. See [Merriam-Webster: chortle](#) and [Cambridge Dictionary: chortle](#).

QUESTION NO: 3

A square has area 64. Which of the following gives 25% of the length of one of its diagonals?

- A.  $2\sqrt{2}$
- B.  $\sqrt{2}$
- C.  $8\sqrt{2}$
- D.  $4\sqrt{2}$

- A.  $2\sqrt{2}$
- B. Option B
- C. Option C
- D. Option D

**ANSWER: A**

**Explanation:**

The correct value is  $2\sqrt{2}$ . An area of 64 square units means the square's side length is  $\sqrt{64}$ , or 8 units, because the area of a square equals its side length multiplied by itself. A diagonal divides a square into two congruent right triangles. By the Pythagorean theorem, the diagonal has length  $\sqrt{(8^2 + 8^2)} = \sqrt{128} = 8\sqrt{2}$  units. To find 25% of this diagonal, multiply by  $25/100$ , which is the same as multiplying by  $1/4$ :  $(1/4)(8\sqrt{2}) = 2\sqrt{2}$ . Therefore,  $2\sqrt{2}$  is exactly one-fourth, or 25%, of the length of a diagonal. This calculation uses the standard square-diagonal relationship  $d = s\sqrt{2}$ , where  $d$  is diagonal length and  $s$  is side length. For a review of square properties, including the diagonal relationship, see [Math is Fun: Square](#). The right-triangle calculation behind that relationship follows the [Pythagorean theorem](#).

#### QUESTION NO: 4

Adapted from *The Wind in the Willows* by Kenneth Grahame (1908)

The Mole had been working very hard all the morning, spring cleaning his little home. First with brooms, then with dusters, then on ladders and steps and chairs, with a brush and a pail of whitewash, 'till he had dust in his throat and eyes, and splashes of whitewash all over his black fur, and an aching back and weary arms. Spring was moving in the air above and in the earth below and around him, penetrating even his dark and lowly little house with its spirit of divine discontent and longing. It was small wonder, then, that he suddenly flung down his brush on the floor, said "Bother!" and "O blow!" and also "Hang spring cleaning!" and bolted out of the house without even waiting to put on his coat. Something up above was calling him imperiously, and he made for the steep little tunnel which answered in his case to the gaveled carriage-drive owned by animals whose residences are nearer to the sun and air. So he scraped and scratched and scabbled and scrooged and then he scrooged again and scabbled and scratched and scraped, working busily with his little paws and muttering to himself, "Up we go! Up we go!" 'till at last, pop! His snout came out into the sunlight, and he found himself rolling in the warm grass of a great meadow.

"This is fine!" he said to himself. "This is better than whitewashing!" The sunshine struck hot on his fur, soft breezes caressed his heated brow, and after the seclusion of the cellarage he had lived in so long, the carol of happy birds fell on his dulled hearing almost like a shout. Jumping off all his four legs at once, in the joy of living and the delight of spring without its cleaning, he pursued his way across the meadow 'till he reached the hedge on the further side.

"Hold up!" said an elderly rabbit at the gap. "Sixpence for the privilege of passing by the private road!" He was bowled over in an instant by the impatient and contemptuous Mole, who trotted along the side of the hedge chaffing the other rabbits as they peeped hurriedly from their holes to see what the row was about. "Onion-sauce! Onion-sauce!" he remarked jeeringly, and was gone before they could think of a thoroughly satisfactory reply. Then they all started grumbling at each other. "How STUPID you are! Why didn't you tell him – " "Well, why didn't YOU say – " "You might have reminded him – " and so on, in the usual way; but, of course, it was then much too late, as is always the case.

Which of these is an assumption that the reader is expected to make when reading this passage?

- A. Every road in the story is a toll road.
- B. The rabbits normally speak in rhyme, but the elderly rabbit is not very good at rhyming, so he doesn't.
- C. Animals can make use of tools similar to the ones that humans use.
- D. Moles normally sleep through spring.
- E. The mole and the rabbits can talk, but no other animal can.

**ANSWER: C**

**Explanation:**

Animals can make use of tools similar to the ones that humans use. This is the necessary assumption because the passage directly portrays the Mole conducting spring cleaning with recognizably human-style household equipment: brooms, dusters, ladders, chairs, a brush, and a pail of whitewash. The reader is meant to enter a fictional world in which animals behave as people do in important ways: they maintain homes, perform chores, wear clothing, travel along roads, use money, and speak to one another. The passage does not pause to establish that the Mole learned these skills or obtained the equipment; instead, it treats his use of tools as ordinary within the story's imaginative setting. Accepting that convention allows the reader to understand both the Mole's exhausting work and his sudden happiness at escaping outdoors into the spring meadow. This type of inference relies on details supplied by the text and on the conventions of animal fantasy, rather than on a factual claim about real moles. The excerpt is from Kenneth Grahame's *The Wind in the Willows*, whose animal characters are consistently depicted with humanlike domestic and social lives. The full text is available through [Project Gutenberg](#), and background on the novel is available from [Encyclopaedia Britannica](#).

**QUESTION NO: 5**

"Archaic" most nearly means \_\_\_\_\_.

- A. useless
- B. meaningless
- C. new
- D. old
- E. frustrating

**ANSWER: D**

**Explanation:**

The correct answer is **old**. *Archaic* describes something that belongs to an earlier period and is no longer common in present-day use. The word is often applied to language, customs, tools, laws, or styles that have survived from the past but now seem noticeably dated. For example, a word such as "thou" may be described as archaic because it was once ordinary English but is rarely used in modern everyday speech. In this context, "old" is the closest and most direct match for the meaning of *archaic*. Major dictionaries define the term in substantially the same way: as very old, old-fashioned, or characteristic of an earlier time. Merriam-Webster defines *archaic* as having the characteristics of the language of the past and no longer in ordinary use, while Cambridge Dictionary describes it as belonging to a period in the past and no longer used. These definitions support choosing "old" as the best vocabulary synonym. See [Merriam-Webster: archaic](#) and [Cambridge Dictionary: archaic](#).

**QUESTION NO: 6**

Which word does not belong with the others?

- A. ice cream
- B. mousse

- C. pie
- D. pizza
- E. cake

**ANSWER: D**

**Explanation:**

“pizza” is the correct choice because the shared category represented by the remaining food terms is dessert. Ice cream, mousse, pie, and cake are standard sweet foods commonly served at the end of a meal. Pizza, by contrast, ordinarily refers to a savory baked dish made with a dough base and toppings such as cheese, tomato, vegetables, or meat. Its usual role is as a main dish, snack, or meal rather than a dessert. In a classification question, the goal is to identify the term that does not fit the most direct and conventional relationship among the words. Here, the distinction is based on the typical type and course of food, not merely on whether each item is baked or can contain sweet ingredients. Although creative dessert pizzas exist, that unusual use does not change the ordinary meaning of the word. Standard dictionary definitions support this everyday classification: [Merriam-Webster's definition of pizza](#) describes it as an open pie made from dough with savory toppings, while [Merriam-Webster's definition of dessert](#) identifies dessert as a typically sweet course served at the end of a meal. Therefore, “pizza” is the word that does not belong.

**QUESTION NO: 7**

If the perimeter of a rectangle is 40, and the width of the rectangle is 8, what is the length of the rectangle?

- A. 12
- B. 10
- C. 4
- D. 5

**ANSWER: A**

**Explanation:**

The correct answer is **12**. A rectangle's perimeter is the total distance around all four sides. Because opposite sides of a rectangle have equal lengths, the perimeter formula is  $P = 2l + 2w$ , where  $l$  represents length and  $w$  represents width. Substituting the given perimeter of 40 and width of 8 gives  $40 = 2l + 2(8)$ . The two width sides together contribute 16 units, so subtracting 16 from the total perimeter leaves 24 units for the two length sides:  $24 = 2l$ . Dividing by 2 shows that each length side measures 12 units. This can also be checked directly: two sides of length 12 total 24, and two sides of width 8 total 16; together,  $24 + 16 = 40$ . Therefore, the rectangle's length is 12. For additional guidance on rectangle perimeter formulas, see [Khan Academy's perimeter review](#) and [Math is Fun's perimeter overview](#).

**QUESTION NO: 8**

Choose the word that best completes the comparison.

“Feline” is to “cat” as “marine” is to “\_\_\_\_\_”.

- A. dog
- B. ocean
- C. lake
- D. organism
- E. biology

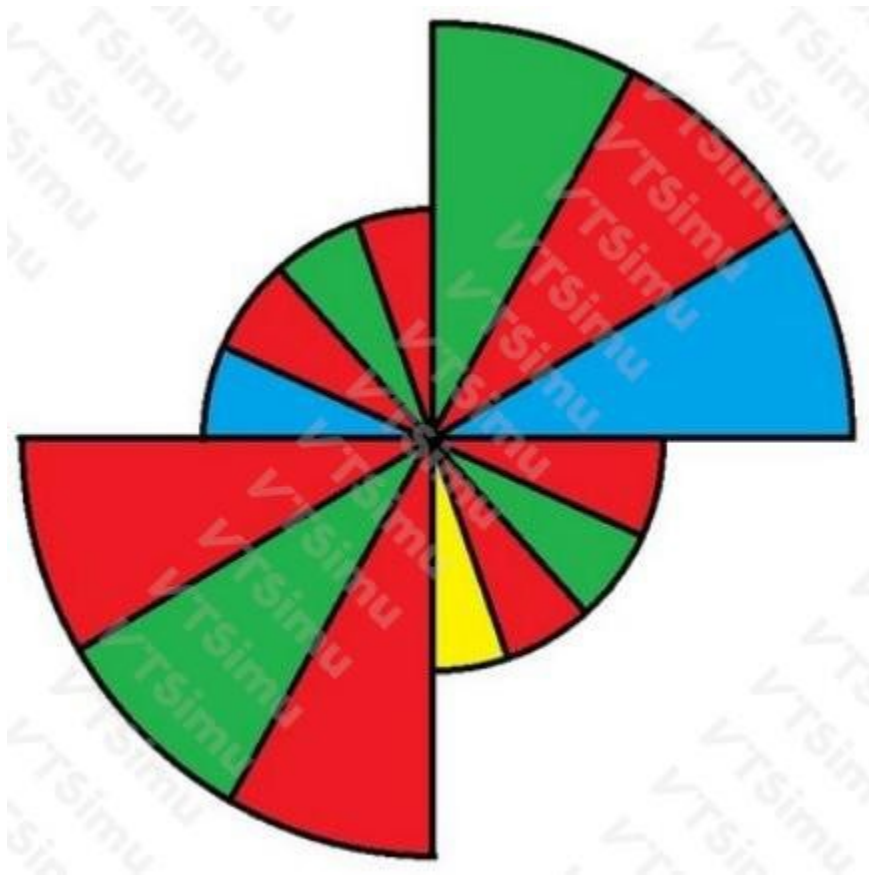
**ANSWER: B**

**Explanation:**

“ocean” is correct because both words in the comparison are adjectives that describe a particular category or environment. “Feline” means relating to, resembling, or belonging to cats. In the same way, “marine” means relating to the sea or ocean. Therefore, the relationship is adjective to the thing or setting it concerns: feline concerns cats, and marine concerns the ocean.

This analogy tests recognition of precise vocabulary relationships rather than a simple association. Although “marine” can describe organisms, activities, equipment, or environments connected with the sea, its core meaning is “of, found in, or produced by the sea.” “Ocean” is consequently the best direct match for the analogy. Merriam-Webster defines [marine](#) as “of or relating to the sea,” and defines [feline](#) as relating to cats. The wording preserves the same grammatical and semantic relationship on both sides of the comparison.

**QUESTION NO: 9**



Above is a target. The radius of the smaller quarter-circles is half that of the larger quarter-circles.

A blindfolded man throws a dart is thrown at the above target. Assuming the dart hits the target, and that no skill is involved, what is the probability that the dart will land inside one of the red regions?

- A.  $\frac{2}{3}$
- B.  $\frac{1}{2}$
- C.  $\frac{5}{9}$
- D.  $\frac{3}{4}$

**ANSWER: B**

**Explanation:**

The correct answer is **1/2**. Because the dart is equally likely to land at any point on the target, its probability of landing in a color equals that color's total area divided by the target's total area. The curved pieces can be rearranged without changing their areas: move the matching red and non-red quarter-circle wedges into corresponding positions. After this rearrangement, the red pieces occupy exactly one half of the square target, while the remaining colored pieces occupy the other half. Since rearranging pieces neither adds nor removes area, the proportion of red area in the original diagram is also one half.

The stated radius relationship is consistent with this area-based comparison: circular areas scale with the square of the radius, so a region with half the radius has one quarter the area of a comparable full circular region. The wedge arrangement accounts for these size differences while preserving the total red area. Therefore, out of all equally likely landing locations on the target, one half lie in red regions, giving a probability of **1/2**. For background on using area to calculate geometric probability, see [Khan Academy's circle-area lesson](#) and [Geometric probability](#).

#### QUESTION NO: 10

A store normally sells a certain coat for \$40. For the holidays it offers a sale where the new price of the coat is now \$30. What percent discount is the store selling the coat for?

- A. 40% discount
- B. 10% discount
- C. 5% discount
- D. 30% discount
- E. 25% discount

#### ANSWER: E

##### Explanation:

The correct answer is **25% discount**. A percent discount is calculated using the original price as the base. The coat's price decreases from \$40 to \$30, so the dollar amount of the discount is \$10. Dividing the discount by the original price gives  $10 \div 40 = 0.25$ . Converting this decimal to a percent by multiplying by 100 gives 25%. Therefore, the sale price represents a 25% reduction from the normal price. This approach is the standard method for percent-decrease problems: subtract to find the amount of change, divide by the starting amount, and express the result as a percentage. The calculation can also be checked by finding 25% of \$40:  $0.25 \times 40 = 10$ . Subtracting that \$10 discount from the regular \$40 price produces the advertised sale price of \$30. For further guidance on calculating percentage changes, see [Khan Academy's percent-change example](#) and [Math is Fun's percentage change guide](#).

#### QUESTION NO: 11

Choose the sentences that best develop the topic sentence shown below. Succulents are a type of plant, and they have much in common with cacti.

- A. Desert animals rely on cacti for water; that is why cacti have evolved sharp spines to protect themselves.
- B. Growing cacti at home is easy. They are a great starter plant for someone who is not very confident in their gardening skills.
- C. Like cacti, succulents require very little water and are well-adapted to desert environments. Many types of succulents also produce flowers when they bloom, like certain types of cacti do.
- D. Unlike cacti, succulents do not have sharp spines. Succulents are also much smaller than many cacti.

#### ANSWER: C

##### Explanation:

“Like cacti, succulents require very little water and are well-adapted to desert environments. Many types of succulents also produce flowers when they bloom, like certain types of cacti do.” best develops the topic sentence because it directly continues the comparison introduced there. It keeps succulents as the main subject while naming cacti as the basis for comparison, so the paragraph remains focused and cohesive. More importantly, both sentences identify shared characteristics: conserving water and being suited to dry conditions, followed by the fact that flowering occurs in many members of both groups. These details support the claim that the plants “have much in common” rather than shifting to an unrelated gardening topic or emphasizing contrast. This is also scientifically sound at the broad instructional level: cacti are succulents, and succulence refers to adaptations that store water in thickened plant parts, helping plants tolerate dry conditions. Many succulent plants, including many cacti, produce flowers. The comparison therefore gives relevant, concrete evidence for the paragraph’s central idea. See the [Encyclopaedia Britannica overview of succulent plants](#) and the [Arizona-Sonora Desert Museum’s guide to succulents](#).

#### QUESTION NO: 12

Choose the best answer that completes the comparison.

“Wine” is to “grapes” as “beer” is to “\_\_\_\_\_”.

- A. beverage
- B. football
- C. summer
- D. grains
- E. vineyard

**ANSWER: D**

**Explanation:**

The correct completion is “grains.” The comparison describes a product and the main agricultural ingredient from which it is made. Wine is produced by fermenting grapes. Similarly, beer is produced by brewing fermented cereal grains—most commonly malted barley, though wheat, rice, corn, and other grains may also be used in particular beer styles. Therefore, “beer” relates to “grains” in the same ingredient-to-finished-beverage way that “wine” relates to “grapes.” This is a broad and accurate term because beer production can use more than one specific type of grain, whereas grapes are the defining fruit used for wine. The Brewers Association explains that the grain bill, including malted grains, provides the fermentable material used in brewing: [Brewers Association beer resources](#). Likewise, Encyclopaedia Britannica describes beer as a fermented alcoholic beverage made from cereal grains: [Encyclopaedia Britannica: beer](#). Thus, “grains” completes the analogy precisely.

#### QUESTION NO: 13

Gary is the getaway driver in a bank robbery. When Gary leaves the bank at 3 PM, he is going 60 mph, but the police officers are 10 miles behind traveling at 80 mph. When will the officers catch up to Gary?

- A. 4:45 PM
- B. 4:00 PM
- C. 3:10 PM
- D. 5:00 PM
- E. 3:30 PM

**ANSWER: E**

**Explanation:**

3:30 PM is correct because this is a relative-speed problem. At 3 PM, Gary has a 10-mile lead. Since the officers travel at 80 miles per hour while Gary travels at 60 miles per hour, the gap closes at the difference between those speeds: 20 miles per hour. To determine how long it takes to erase a 10-mile gap, divide the distance gap by the closing speed:  $10 \text{ miles} \div 20 \text{ miles per hour} = 0.5 \text{ hour}$ . One-half hour equals 30 minutes. Adding 30 minutes to the 3 PM starting time gives 3:30 PM. This method works because both vehicles continue in the same direction, so only the amount by which the officers gain on Gary each hour matters. In 30 minutes, the officers travel 40 miles, while Gary travels 30 miles; the officers therefore gain exactly 10 miles, which matches Gary's initial lead. For further guidance on rate, time, and distance relationships, see [Khan Academy's rate-problem lesson](#) and [OpenStax's uniform-motion applications](#).

#### QUESTION NO: 14

"Impervious" most closely means \_\_\_\_\_.

- A. moral
- B. partition
- C. unknowing
- D. unaffected
- E. ignorant

**ANSWER: D**

#### Explanation:

The correct answer is **unaffected**. *Impervious* literally describes something that does not allow a substance, especially water or another liquid, to pass through it. For example, a waterproof material may be impervious to rain. In its common figurative use, however, the word describes a person or thing that is not influenced, harmed, persuaded, or changed by something. A student who is impervious to distractions remains focused despite surrounding noise or interruptions; that student is unaffected by those distractions. Similarly, a person may be impervious to criticism if criticism does not alter that person's feelings or behavior. This figurative meaning is the best fit for a vocabulary question asking for the closest general synonym. Major dictionaries define *impervious* both in the physical sense of not permitting passage and in the extended sense of being incapable of being affected or influenced. See the definitions from [Merriam-Webster](#) and [Cambridge Dictionary](#).

#### QUESTION NO: 15

Often, children who read fantasy or science fiction books are thought to be quite strange and anti-social. While this stereotype exists today, these children – at least those who truly enjoy this kind of reading – should be glad that such a stereotype can exist at all. It has not always been the case that such literature even existed. It was only in the twentieth century that the idea of “fantasy,” as separate from traditional myths, really became popular and even able to be stereotyped.

Which of the following best concludes the paragraph in accord with its general idea?

- A. The early twentieth was a period of great scientific expansion, leading the human imagination to fabricate a number of interesting creatures like those found in fantasy novels.
- B. Anyway, a little bit of social pressure never hurt anyone, so they should appreciate this stereotyping, which will likely make them psychologically stronger.
- C. Anti-social reading habits are often judged only based upon popular imaginations and not the actual facts of the case.
- D. Before this, fantasy and science fiction books were so rare that they were almost completely unknown and unavailable.
- E. Such stereotypes have an element of unfairness, but still, they do express how strange these children can act at times.

**ANSWER: D**

#### Explanation:

"Before this, fantasy and science fiction books were so rare that they were almost completely unknown and unavailable." best completes the paragraph because it directly develops the passage's central contrast between the present and the period before fantasy became a recognized, popular literary category. The author begins with the modern stereotype of children who enjoy fantasy or science fiction, then makes the ironic point that readers should be glad the stereotype can exist: a stereotype requires that enough people know about the category being stereotyped. The final sentence states that fantasy, distinguished from traditional myths, became popular in the twentieth century. A concluding sentence should therefore look back to the earlier period and emphasize that this type of literature was not widely known or accessible. The selected conclusion creates a clear, logical endpoint by restating the consequence of the historical change described in the paragraph. It also preserves the author's focus on the availability and public recognition of the genre, rather than shifting to judgments about readers or the causes of imaginative writing. For background on fantasy as a distinct literary genre, see [Encyclopaedia Britannica's overview of fantasy](#) and [Merriam-Webster's definition of fantasy](#).

#### QUESTION NO: 16

"Baron" is to "nobility" as "beggar" is to "\_\_\_\_\_".

- A. underclass
- B. petition
- C. wastrel
- D. forgotten
- E. deprived

#### ANSWER: A

#### Explanation:

"underclass" correctly completes the analogy because the relationship is one of an individual member to a broader social group. A baron is an individual who belongs to the nobility, the socially privileged class traditionally associated with hereditary rank or title. In parallel, a beggar is an individual who may be considered part of the underclass, a term for the most economically and socially disadvantaged segment of society. The analogy therefore follows the bridge sentence: "A baron is a member of the nobility; a beggar is a member of the underclass."

This is a classification analogy rather than one based on an action, description, or object associated with the first word. The needed term must name a general category that can include a beggar in the same way that "nobility" includes a baron. Merriam-Webster defines [underclass](#) as a class of people at the lowest socioeconomic level, while its entry for [baron](#) identifies the title as one belonging to the nobility. Those definitions support the matching member-to-class relationship.

#### QUESTION NO: 17

"American Students and Foreign Languages" by Matthew Miner (2013)

American students often find it difficult to understand the need for learning a foreign language. In part, this lack of understanding seems to occur because of the insulated nature of American geography. Unlike Europe, America is a massive country, comprised of states that all speak the same language. When an American travels from state to state, he or she is not confronted with a completely different language group as is the case when, for example, a Frenchman travels from his native land to the neighboring country of Italy or to England. Although America does have Canada to its north and Mexico to its south, it still does not have the great internal variety of languages as one finds in the small European continent. Therefore, students often do not experience the practical importance of knowing other languages.

Of course, America has always been called the "melting pot," for many peoples have arrived on its shores, bringing their own distinctive cultures and languages with them. Still, this very expression – "melting pot" – shows that these immigrant cultures do not forever retain their own particular manners and languages. With time, these varied cultures become part of the American culture as a whole. While they do influence and change the culture, they likewise become assimilated into it. Their spoken language often becomes English. Even if they retain their mother tongue, they generally speak it privately. This is done as a matter of personal heritage, not as part of the day-to-day life in the culture.

Additionally, America's global dominance likewise allows Americans to avoid learning other languages. Since America has such influence over the rest of the world, it is generally in the interests of other peoples to learn English in order to be part of the economic, political, and military world in which America operates. Therefore, even at international meetings that are filled with people from many nationalities and language groups, English-speakers are at an advantage because they can talk with the many individuals who speak English. The work and learning of other peoples thus allows the Americans to convince themselves that there is no need to learn another language.

Lastly, American education has come to emphasize mathematics and science to such a great degree that things such as language can often seem unimportant. The main goals of education are said to be the training of students for the technology workforce. If this is presented as the main goal of school, few children will understand why any of the non-scientific subjects are included in the curriculum. If a subject does not help in learning math and science, it will appear to be irrelevant. In particular, foreign languages do not seem to add to the teaching of math and science, which can be done very easily and effectively in English alone.

Of course, many other reasons could be considered, and a more detailed discussion would undertake such a lengthy investigation. Still, the factors discussed above do provide some sense as to why American students find it difficult to understand the importance of learning a foreign language.

What is the contrast expressed in the first paragraph?

- A. Citizens of the United States travel far less frequently than Europeans.
- B. Europeans have a much greater appreciation of other cultures and ways of life than do citizens of the United States.
- C. Europeans are far more likely to understand that there are other nations, for the French and English meet regularly in cities and towns.
- D. While Europe has a number of language groups in close proximity, this is generally not the case within the United States of America.
- E. Europe is much smaller than the United States.

**ANSWER: D**

**Explanation:**

"While Europe has a number of language groups in close proximity, this is generally not the case within the United States of America." correctly states the paragraph's central contrast. The passage compares the linguistic geography encountered by travelers in Europe with that encountered by travelers moving among U.S. states. It explains that an American can travel from one state to another without entering a different language group, whereas a European may cross a national border—for example, from France into Italy or England—and encounter a different primary language. The contrast is therefore not simply about physical size; it is specifically about how the proximity of distinct language communities makes the practical value of foreign-language knowledge more visible in Europe. This comparison supports the author's broader claim that American students may have fewer everyday experiences showing why another language is necessary. In reading-comprehension questions, the best answer should restate the relationship explicitly developed in the passage without adding claims that the author did not make. This choice accurately synthesizes the paragraph's details about states sharing one language and European countries containing nearby, differing language groups. For guidance on identifying a passage's central idea and using textual evidence, see [Reading Rockets: Reading Comprehension](#) and [Khan Academy: SAT Reading and Writing](#).

**QUESTION NO: 18**

An antonym of "critical" is \_\_\_\_\_.

- A. pleasing
- B. overview
- C. negative
- D. reviewer
- E. accepting

**ANSWER: E**

**Explanation:**

The correct answer is “accepting.” In this context, *critical* means inclined to judge, find fault, or express disapproval. Its antonym must therefore describe an attitude of approval, openness, or willingness to receive something without excessive judgment. *Accepting* has precisely that meaning: an accepting person is receptive and tolerant, and may acknowledge or approve of people, ideas, or circumstances rather than focusing on defects. For example, a critical response might emphasize mistakes in a classmate’s work, whereas an accepting response recognizes the work fairly and receives it without undue disapproval. This makes “accepting” the best opposite in meaning. Standard dictionary definitions support this relationship: Merriam-Webster defines *critical* in part as inclined to criticize severely, while its entry for *accepting* describes being willing to accept or tolerate. See [Merriam-Webster: critical](#) and [Merriam-Webster: accepting](#).

**QUESTION NO: 19**

Find the distance from point (2, 3) to point (6, 7).

- A. 1
- B.  $4\sqrt{2}$
- C.  $\sqrt{2}$
- D. 4
- E.  $5\frac{1}{2}$

- A. Option A
- B.  $4\sqrt{2}$
- C. Option C
- D. Option D
- E. Option E

**ANSWER: B**

**Explanation:**

The correct distance is  $4\sqrt{2}$ . Use the coordinate-plane distance formula, which applies the Pythagorean theorem to the horizontal and vertical changes between two points. From (2, 3) to (6, 7), the horizontal change is  $6 - 2 = 4$  units and the vertical change is  $7 - 3 = 4$  units. These changes form the two perpendicular legs of a right triangle. Therefore, the distance is  $\sqrt{(4^2 + 4^2)}$ , or  $\sqrt{(16 + 16)} = \sqrt{32}$ . Since 32 has a perfect-square factor of 16, simplify  $\sqrt{32}$  as  $\sqrt{(16 \times 2)} = 4\sqrt{2}$ . This exact radical form is preferred because it represents the distance without rounding. As a decimal check,  $4\sqrt{2}$  is approximately 5.66 units, which is reasonable because the segment is the hypotenuse of a right triangle whose legs are each 4 units long. The distance formula and its connection to the Pythagorean theorem are described by [Khan Academy](#) and [Math Is Fun](#).

**QUESTION NO: 20**

What is the perimeter of a square with a side length of 4?

- A. 20
- B. 5

C. 12

D. 16

**ANSWER: D**

**Explanation:**

The correct answer is **16**. A square has four sides of equal length, so its perimeter is found by adding the lengths of all four sides. With each side measuring 4 units, the calculation is  $4 + 4 + 4 + 4 = 16$  units. This can also be expressed with the perimeter formula for a square:  $\text{perimeter} = 4 \times \text{side length}$ . Substituting the given side length gives  $4 \times 4 = 16$ . Perimeter measures the total distance around the outside boundary of a shape, rather than the amount of space inside it. Therefore, the square's perimeter is 16 units. For a review of perimeter as the distance around a two-dimensional figure, see [Khan Academy's perimeter review](#). The square-perimeter relationship is also presented in [Math Is Fun's square reference](#).

**QUESTION NO: 21**

What is  $x^2 \times x^9$

A.  $x^7$

B.  $x^{18}$

C.  $x^5$

D.  $x^{11}$

**ANSWER: D**

**Explanation:**

The correct result is  **$x^{11}$** , interpreting the notation in the question as  $x^2$  multiplied by  $x^9$ . Both factors have the identical base,  $x$ . The product-of-powers rule states that when powers with the same nonzero base are multiplied, their exponents are added:  $x^m \times x^n = x^{m+n}$ . Applying that rule gives  $x^2 \times x^9 = x^{2+9} = x^{11}$ . The exponent 11 shows that the product contains eleven factors of  $x$ :  $x \times x \times x \times x \times x \times x \times x \times x \times x \times x \times x$ . This exponent rule follows directly from grouping the factors from each power together and is a fundamental property used when simplifying algebraic expressions. For a concise statement and examples of exponent laws, see [Khan Academy's exponent-properties review](#) and [OpenStax Elementary Algebra](#).

**QUESTION NO: 22**

Which word does not belong with the others?

A. mound

B. diamond

C. base

D. pineapple

E. park

**ANSWER: D**

**Explanation:**

The correct answer is "pineapple." The words "mound," "diamond," "base," and "park" share a clear connection to baseball. A base is one of the stations a runner reaches during play, while the diamond is the infield's characteristic shape and is commonly used as a name for the field itself. The pitcher delivers the ball from the mound, and baseball is played in a

ballpark. These terms therefore belong to one common sports vocabulary group and describe familiar places or features of a baseball game.

“Pineapple” belongs to a different category because it is the name of a tropical fruit, rather than a baseball term. Identifying the common relationship among most of the words and selecting the term outside that relationship is the central skill tested by this verbal-classification question. Standard baseball terminology, including bases, the pitcher’s mound, and the ballpark, is described by [Major League Baseball’s glossary](#). For a general definition and background on the fruit, see [Encyclopaedia Britannica’s pineapple article](#).

#### QUESTION NO: 23

An antonym for “dull” is \_\_\_\_\_.

- A. stimulating
- B. whittled
- C. rounded
- D. stupid
- E. foolish

#### ANSWER: A

##### Explanation:

The correct answer is “stimulating.” In this context, *dull* means lacking interest, excitement, or liveliness. Something stimulating has the opposite quality: it arouses interest, encourages thought, or creates excitement. For example, a dull lecture may feel boring and monotonous, while a stimulating lecture holds attention and prompts active curiosity. This is a standard antonym relationship based on the common sense of *dull* as uninteresting rather than sharpness, brightness, or intelligence.

Dictionary definitions support this contrast. Merriam-Webster defines *dull* in one relevant sense as “lacking in interest or power to attract,” while it defines *stimulating* as “arousing or affecting interest, thought, or feeling.” These meanings directly oppose each other in the sentence’s vocabulary context. See [Merriam-Webster: dull](#) and [Merriam-Webster: stimulating](#). Choosing “stimulating” demonstrates recognition that antonyms are words with contrasting meanings and that the intended meaning of a multiple-meaning word must be determined from the available choices.

#### QUESTION NO: 24

Suzanne is at the grocery store. She has \$5.00 to spend on produce. Oranges are \$2.50 per pound, apples cost \$1.50 per pound and bananas are \$0.50 per pound. Which combination of fruit will fit her budget?

- A. 2 pounds of oranges and 1 pound of apples
- B. 1 pound of oranges, 1 pound of apples and 2 pounds of bananas
- C. 3 pounds of apples and 2 pounds of bananas
- D. 1 pound of oranges, 1.5 pounds of apples and 1.5 pounds of bananas
- E. 1.5 pounds of oranges and 4 pounds of bananas

#### ANSWER: B

##### Explanation:

**1 pound of oranges, 1 pound of apples and 2 pounds of bananas** fits Suzanne’s budget exactly. Calculate the cost of each fruit type separately using the listed price per pound. One pound of oranges costs \$2.50. One pound of apples costs \$1.50. Two pounds of bananas cost  $2 \times \$0.50$ , or \$1.00. Adding these amounts gives  $\$2.50 + \$1.50 + \$1.00 = \$5.00$ .

Because the total is exactly \$5.00, Suzanne can purchase this combination without exceeding the amount she has available. This problem uses multiplication to find each item's cost from a unit rate, followed by addition to find the total cost. Keeping the units consistent—pounds multiplied by dollars per pound—ensures that each product is a dollar amount before it is added to the budget total. This is the same unit-price reasoning used in everyday shopping and in basic algebraic word problems. For practice with unit rates and proportional reasoning, see [Khan Academy's unit-rate overview](#). The general arithmetic concepts are also reviewed by [Math is Fun's addition guide](#).

#### QUESTION NO: 25

"Sweet" is to "cloying" as "good" is to "\_\_\_\_\_".

- A. enjoyable
- B. facetious
- C. acceptable
- D. stellar
- E. horrible

**ANSWER: D**

#### Explanation:

"stellar" is correct because the relationship in the analogy is intensification: "cloying" describes something that is sweet to an excessive or unpleasant degree. In the same way, "stellar" describes something that is exceptionally or outstandingly good. Thus, the analogy moves from a basic quality ("sweet") to a word expressing that quality at a much stronger level ("cloying"), then applies the same pattern to "good" and "stellar."

Major dictionaries support this meaning. Merriam-Webster defines "stellar" in its figurative use as "outstanding" or "excellent," which makes it a strong intensified form of "good." See [Merriam-Webster's definition of stellar](#). Likewise, Cambridge Dictionary defines "stellar" as "extremely good," directly matching the intended degree relationship in the analogy: [Cambridge Dictionary's definition of stellar](#).

The word also has an origin connected to stars, and its figurative use evokes something of remarkable quality or distinction. Therefore, "stellar" precisely completes the comparison by preserving both the meaning and the increase in intensity.

#### QUESTION NO: 26

One night, the temperature was  $-12^{\circ}$

F. By the next afternoon, the temperature increased  $23^{\circ}$ . What was the new temperature?

- A.  $-33^{\circ}$
- B.  $-11^{\circ}$
- C.  $33^{\circ}$
- D.  $11^{\circ}$
- E. By the next afternoon, the temperature increased  $23^{\circ}$ . What was the new temperature?

**ANSWER: D**

#### Explanation:

The correct new temperature is  $11^{\circ}$ . The starting temperature was  $-12^{\circ}\text{F}$ , and an increase of  $23^{\circ}$  means that 23 is added to the starting value:  $-12 + 23$ . Because the values have different signs, compare their distances from zero: 23 is 23 units

above zero and  $-12$  is 12 units below zero. Moving 23 degrees upward from  $-12$  first reaches 0 after 12 degrees of increase, leaving 11 more degrees of increase. Therefore, the final temperature is  $11^{\circ}\text{F}$ .

Temperature-change problems can be represented on a number line, where temperatures below zero are negative and an increase is movement to the right. Starting at  $-12$  and moving right 23 units ends at positive 11. This is an application of integer addition: adding a positive integer raises the value, even when the initial value is negative. For additional review of adding signed numbers and interpreting them on a number line, see [Khan Academy's lesson on adding negative numbers](#) and [Math is Fun's negative-number guide](#).

## QUESTION NO: 27

Adapted from *On the Origin of Species* by Charles Darwin (1859)

How will the struggle for existence, discussed too briefly in the last chapter, act in regard to variation? Can the principle of selection, which we have seen is so potent in the hands of man, apply in nature? I think we shall see that it can act most effectually. Let it be borne in mind in what an endless number of strange peculiarities our domestic productions, and, in a lesser degree, those under nature, vary; and how strong the hereditary tendency is. Under domestication, it may be truly said that the whole organization becomes in some degree plastic. Let it be borne in mind how infinitely complex and close-fitting are the mutual relations of all organic beings to each other and to their physical conditions of life. Can it, then, be thought improbable, seeing that variations useful to man have undoubtedly occurred, that other variations useful in some way to each being in the great and complex battle of life, should sometimes occur in the course of thousands of generations? If such do occur, can we doubt (remembering that many more individuals are born than can possibly survive) that individuals having any advantage, however slight, over others, would have the best chance of surviving and of procreating their kind? On the other hand, we may feel sure that any variation in the least degree injurious would be rigidly destroyed. This preservation of favorable variations and the rejection of injurious variations, I call Natural Selection. Variations neither useful nor injurious would not be affected by natural selection, and would be left a fluctuating element, as perhaps we see in the species called polymorphic.

We shall best understand the probable course of natural selection by taking the case of a country undergoing some physical change, for instance, of climate. The proportional numbers of its inhabitants would almost immediately undergo a change, and some species might become extinct. We may conclude, from what we have seen of the intimate and complex manner in which the inhabitants of each country are bound together, that any change in the numerical proportions of some of the inhabitants, independently of the change of climate itself, would most seriously affect many of the others. If the country were open on its borders, new forms would certainly immigrate, and this also would seriously disturb the relations of some of the former inhabitants. Let it be remembered how powerful the influence of a single introduced tree or mammal has been shown to be. But in the case of an island, or of a country partly surrounded by barriers, into which new and better adapted forms could not freely enter, we should then have places in the economy of nature which would assuredly be better filled up, if some of the original inhabitants were in some manner modified; for, had the area been open to immigration, these same places would have been seized on by intruders. In such case, every slight modification, which in the course of ages chanced to arise, and which in any way favoured the individuals of any of the species, by better adapting them to their altered conditions, would tend to be preserved; and natural selection would thus have free scope for the work of improvement.

What does Darwin claim about the idea of variation?

- A. none of these answers
- B. nothing clear; Darwin hasn't yet explained his idea at this point.
- C. that species often evolve and have variations over one lifetime
- D. that variation is the best part of life
- E. that good variations in species will last, while bad ones will die off

**ANSWER: E**

### Explanation:

Darwin's claim is that favorable inherited variations tend to persist because individuals possessing them have a greater chance of surviving and producing offspring. In the passage, he connects variation to the "struggle for existence": because more individuals are born than can survive, even a slight beneficial difference can give an individual an advantage under its particular conditions of life. Over many generations, those useful traits are therefore more likely to be passed on. Darwin explicitly defines this process as natural selection, writing that it preserves favorable variations and rejects injurious ones. He

further explains that environmental change can alter which traits are advantageous. When conditions such as climate change, organisms with modifications that better fit the new conditions are more likely to remain and reproduce, allowing those modifications to become established in the population. Thus, the central point is not that every variation is automatically beneficial, but that variations helpful to survival and reproduction are retained over time, whereas harmful variations tend to disappear. This is the mechanism Darwin presents to explain adaptation through natural selection. The wording in the passage can be read in the original text at [Project Gutenberg's edition of \*On the Origin of Species\*](#); further background on natural selection is available from the [University of California Museum of Paleontology](#).

#### QUESTION NO: 28

Adapted from "The Writing of Essays" in *Certain Personal Matters* by H.G. Wells (1901)

The art of the essayist is so simple, so entirely free from canons of criticism, and withal so delightful, that one must needs wonder why all men are not essayists. Perhaps people do not know how easy it is. Or perhaps beginners are misled. Rightly taught it may be learnt in a brief ten minutes or so, what art there is in it. And all the rest is as easy as wandering among woodlands on a bright morning in the spring.

Then sit you down if you would join us, taking paper, pens, and ink; and mark this, your pen is a matter of vital moment. For every pen writes its own sort of essay, and pencils also after their kind. The ink perhaps may have its influence too, and the paper; but paramount is the pen. This, indeed, is the fundamental secret of essay-writing. Wed any man to his proper pen, and the delights of composition and the birth of an essay are assured. Only many of us wander through the earth and never meet with her – futile and lonely men.

And, of all pens, your quill for essays that are literature. There is a subtle informality, a delightful easiness, perhaps even a faint immorality essentially literary, about the quill. The quill is rich in suggestion and quotation. There are quills that would quote you Montaigne and Horace in the hands of a trades-union delegate. And those quirky, idle noises this pen makes are delightful, and would break your easy fluency with wit. All the classical essayists wrote with a quill, and Addison used the most expensive kind the Government purchased. And the beginning of the inferior essay was the dawn of the cheap steel pen.

Wells suggests that bad essays began being written when \_\_\_\_\_.

- A. people forgot how to use the right pen
- B. steel pens were introduced
- C. people started writing things other than essays
- D. people stopped learning how to write essays properly

**ANSWER: B**

#### Explanation:

"steel pens were introduced" is correct because Wells explicitly connects the decline of essay quality with "the dawn of the cheap steel pen." In this figurative and humorous discussion of writing, he treats the choice of pen as central to an essayist's style and success. He praises the quill as especially suited to literary essays, associating it with ease, informality, wit, quotation, and the tradition of classical essayists. His final sentence then identifies a specific historical change: the arrival of inexpensive steel pens. By calling that moment "the beginning of the inferior essay," Wells suggests that bad essays began to appear when cheap steel pens came into use. The question asks what he suggests, rather than whether the claim is literally true; the answer therefore follows his stated opinion in the passage. This wording comes directly from Wells's essay, collected in *Certain Personal Matters*, which can be consulted through [Project Gutenberg's edition of \*Certain Personal Matters\*](#). The passage also reflects the essay's playful, deliberately exaggerated tone, but its causal claim remains unambiguous: Wells dates the rise of inferior essays to the introduction of the cheap steel pen. For background on Wells and his writings, see the [Encyclopaedia Britannica biography of H. G. Wells](#).

#### QUESTION NO: 29

"Temper" most closely means \_\_\_\_\_.

- A. exhilaration

- B. exultation
- C. strengthen
- D. overbearing
- E. despot

**ANSWER: C**

**Explanation:**

“strengthen” is correct because *temper* can function as a verb meaning to make a material stronger, tougher, or better able to withstand stress through a controlled process. This meaning is especially familiar in metalworking. Steel is tempered by carefully heating it and then cooling it under controlled conditions. That treatment changes the metal’s internal structure and improves useful properties such as toughness, hardness, and resistance to breaking. Thus, when a question uses *temper* in the sense associated with tempered steel, “strengthen” is the closest available synonym.

The word also has uses connected with moderating or adjusting something, as in tempering criticism with kindness. However, its material-science sense is well established and directly supports the idea of increasing a substance’s durability or strength. Merriam-Webster defines the relevant sense of *temper* as treating metal by heating and cooling in a way that produces the desired hardness and elasticity. Britannica similarly describes tempering as a heat treatment used to increase the toughness of hardened steel. These standard definitions support selecting “strengthen” as the best answer. See [Merriam-Webster’s definition of temper](#) and [Britannica’s explanation of tempering](#).

**QUESTION NO: 30**

What is 48,570 in scientific notation?

- A.  $4,857 \times 10^2$
- B.  $4.857 \times 10^4$
- C.  $4,857 \times 10^{-2}$
- D.  $48,57 \times 10^4$

**ANSWER: B**

**Explanation:**

The correct scientific-notation form is  $4.857 \times 10^4$ . Scientific notation expresses a nonzero number as a coefficient that is at least 1 and less than 10, multiplied by a power of 10. Starting with 48,570, place the decimal point immediately after the first nonzero digit to obtain 4.857. The decimal point has moved four places to the left from its position at the end of 48,570. To preserve the original value, the coefficient must therefore be multiplied by  $10^4$ . Indeed,  $4.857 \times 10,000 = 48,570$ . The final zero in 48,570 does not need to appear in the coefficient unless the problem specifically states that it is a significant measured digit. This result follows the standard normalized form used for scientific notation, in which the coefficient remains between 1 and 10. See the scientific-notation overview from [Khan Academy](#) and the National Institute of Standards and Technology’s discussion of powers of ten in [NIST SI prefixes](#).

**QUESTION NO: 31**

“Petty” is the opposite of \_\_\_\_\_.

- A. frivolous
- B. greater
- C. lesser

D. minor

**ANSWER: B**

**Explanation:**

“Greater” is correct because *petty* describes something minor, trivial, or of little importance. Its opposite must therefore convey increased importance, significance, or degree. *Greater* means larger in amount, extent, degree, or importance, making it the best antonym in this context. For example, a petty concern is a small concern, whereas a greater concern is more substantial or important. This contrast directly tests the relationship between “little or no importance” and “high importance.” Standard dictionary definitions support this usage: Merriam-Webster defines *petty* as having secondary rank or importance and defines *greater* as being larger in size, amount, degree, or importance. See [Merriam-Webster: petty](#) and [Merriam-Webster: greater](#). Therefore, “greater” supplies the intended opposite in the sentence.

**QUESTION NO: 32**

Select the word that is most nearly the same in meaning as the word in capital letters.

MUNDANE

- A. Exciting
- B. Intelligent
- C. Boring
- D. Common
- E. Plausible

**ANSWER: D**

**Explanation:**

“Common” is the best synonym for “mundane.” Mundane describes something that belongs to ordinary, everyday life rather than something unusual, exceptional, or elevated. A mundane task might be a routine household chore, and mundane details are the familiar practical details of daily existence. In this sense, “common” closely captures the idea that something is usual, frequent, or not distinctive. The word can sometimes carry a mildly negative tone, suggesting dullness because of its ordinariness, but its central meaning remains everyday or commonplace. Major dictionaries define “mundane” in these closely related terms: Merriam-Webster gives meanings including “worldly, earthly” and “commonplace, ordinary,” while Cambridge Dictionary defines it as “very ordinary and therefore not interesting.” Thus, when choosing the word most nearly equal in meaning, “Common” directly matches the core definition of “MUNDANE.” See [Merriam-Webster’s definition of mundane](#) and [Cambridge Dictionary’s definition of mundane](#).

**QUESTION NO: 33**

Which word does not belong with the others?

- A. swing set
- B. monkey bars
- C. track
- D. teeter totter
- E. slide

**ANSWER: C**

**Explanation:**

The correct answer is **track**. The other terms—"swing set," "monkey bars," "teeter totter," and "slide"—name individual pieces of equipment commonly installed in a playground for children's recreation. Each describes a structure or apparatus that a child actively uses for swinging, climbing, balancing, or sliding. A track, by contrast, is a prepared route or circuit used for running or racing. It may be located on school grounds or near a playground, but it is not normally classified as playground equipment. The distinction is based on category: the shared group consists of specific playground apparatus, while "track" refers to an athletic surface or course. Identifying the common category and then finding the item outside that category is the key skill tested by this type of verbal-reasoning question. Playground design guidance also distinguishes play equipment from site features and athletic facilities. See the [U.S. Consumer Product Safety Commission's Public Playground Safety Handbook](#) and the [Merriam-Webster definition of "track"](#).

**QUESTION NO: 34**

Adam has 3 siblings. When his mother bakes a cake, each of the 4 children is given  $\frac{1}{4}$  of the cake. Adam only finished  $\frac{1}{3}$  of his share of cake. If the original cake had 12 slices, how many slices did Adam eat?

- A. 6
- B. 2
- C. 4
- D. 1
- E. 3

**ANSWER: D****Explanation:**

The correct answer is **1**. Adam and his three siblings make four children altogether, so each child receives one-fourth of the 12-slice cake. One-fourth of 12 is 3, meaning Adam's individual share contains 3 slices. He eats one-third of that share, so the calculation is one-third multiplied by 3 slices:  $(\frac{1}{3}) \times 3 = 1$ . Therefore, Adam ate exactly 1 slice of cake. This can also be viewed as finding a fraction of the entire cake: Adam eats one-third of his one-fourth share, which is  $\frac{1}{3} \times \frac{1}{4} = \frac{1}{12}$  of the cake. Since the full cake has 12 equal slices, one-twelfth of it is 1 slice. This problem uses the rule that "of" in a fraction problem indicates multiplication. For additional guidance on multiplying fractions and interpreting fractions of quantities, see [Khan Academy's multiplying fractions lesson](#) and [Math Is Fun's explanation of fraction multiplication](#).

**QUESTION NO: 35**



Mr. Chapman



Mr. Cleese



Mr. Gilliam



Mr. Idle



Mr. Jones



Mr. Palin

Six friends work for a company as maintenance staff.

Above are six graphs. Each graph shows the distance that one of the six is from his home from 8 AM to 9 AM on a particular day, relative to the time. The time of day is represented by the horizontal axis, and the distance from home is represented by the vertical axis. The name of the person represented by each graph is under the graph.

Of the six, which one works the night shift, and therefore went from work to home between 8 AM and 9 AM?

- A. Mr. Jones
- B. Mr. Palin
- C. Mr. Gilliam
- D. Mr. Cleese

**ANSWER: B**

**Explanation:**

**Mr. Palin** is correct because his graph shows the distance from home decreasing as time moves from 8 AM to 9 AM. On a distance-versus-time graph, the horizontal axis records the passage of time and the vertical axis records how far the person is from home. A downward-sloping line therefore means that the person is becoming progressively closer to home. That pattern matches someone traveling from work back home after completing a night shift.

The key is to interpret distance from home rather than total distance traveled. At the start of the interval, Mr. Palin is some distance away from home; by the end, the plotted distance is lower, indicating that he has moved toward home. This is the graphical relationship described by a negative slope: as the time value increases, the distance-from-home value decreases. For a review of how slope represents change in a graph, see [Khan Academy's slope lesson](#). The coordinate-plane convention of using the horizontal axis for an independent quantity such as time is also summarized by [Encyclopaedia Britannica's coordinate-system overview](#).

**QUESTION NO: 36**

Four students ran for student body president – Benjy, Carla, Hy, and Lisa.

According to the rules, a candidate must win more than 50% of the vote in order to claim an outright victory; otherwise, a runoff must be held between the top two vote-getters.

It is known that Benjy got 56 votes, Carla got 72 votes, and Lisa got 66 votes. It is also known that a runoff must be held between Carla and Lisa. What is the greatest possible percent of the vote that Hy could have gotten? (Nearest whole percent)

- A. 27%
- B. 34%
- C. 25%
- D. 38%

**ANSWER: C**

**Explanation:**

The correct answer is **25%**. Because the runoff is specifically between Carla and Lisa, Carla must have received the most votes and Lisa must have received the second-most votes. Hy therefore can receive no more than 65 votes, which is one fewer than Lisa's 66 votes. To make Hy's percentage as large as possible, use this maximum possible vote total for Hy: 65 votes.

The total number of votes would then be  $56 + 72 + 66 + 65 = 259$ . Hy's share of the vote is therefore  $65/259$ , or approximately 0.25097. Converting the decimal to a percentage gives approximately 25.097%. Rounded to the nearest whole percent, this is 25%.

This setup also satisfies the stated election condition: with 259 total votes, Carla's 72 votes are well below a majority, so an outright winner does not exist and a runoff is required. The calculation uses the standard percent relationship: part divided by whole, multiplied by 100. See [Khan Academy's percentage review](#) and [Purplemath's guide to percent calculations](#).

**QUESTION NO: 37**

Adapted from *The Evolutionist at Large* by Grant Allen (1881)

I am engaged in watching a brigade of ants out on foraging duty, and intent on securing for the nest three whole segments of a deceased earthworm. They look for all the world like those busy companies one sees in the Egyptian wall paintings, dragging home a huge granite colossus by sheer force of bone and sinew. Every muscle in their tiny bodies is strained to the utmost as they pry themselves laboriously against the great boulders that strew the path, and that are known to our Brobdingnagian intelligence as grains of sand. Besides the workers themselves, a whole battalion of stragglers runs to and fro upon the broad line that leads to the headquarters of the community. The province of these stragglers, who seem so busy doing nothing, probably consists in keeping communications open, and encouraging the sturdy pullers by occasional relays of fresh workmen. I often wish that I could for a while get inside those tiny brains, and see, or rather smell, the world as ants do. For there can be little doubt that to these brave little carnivores here the universe is chiefly known as a collective bundle of odors, simultaneous or consecutive. As our world is mainly a world of visible objects, theirs, I believe, is mainly a world of olfactible things.

In the head of every one of these little creatures is something that we may fairly call a brain. Of course most insects have no real brains; the nerve-substance in their heads is a mere collection of ill-arranged ganglia, directly connected with their organs of sense. Whatever man may be, an earwig at least is a conscious, or rather a semi-conscious, automaton. He has just a few knots of nerve cells in his little pate, each of which leads straight from his dim eye or his vague ear or his indefinite organs of taste; and his muscles obey the promptings of external sensations without possibility of hesitation or consideration, as mechanically as the valve of a steam engine obeys the governor balls. The poor soul's intellect is wholly deficient, and the senses alone make up all that there is of him, subjectively considered. But it is not so with the highest insects. They have something that truly answers to the real brain of men, apes, and dogs, to the cerebral hemispheres and the cerebellum that are superadded in us mammals upon the simple sense-centers of lower creatures. Besides the eye, with its optic nerve and optic perceptive organs – besides the ear, with its similar mechanism – we mammalian lords of creation have a higher and more genuine brain, that collects and compares the information given to the senses, and sends down the appropriate messages to the muscles accordingly. Now, bees and flies and ants have got much the same sort of arrangement, on a smaller scale, within their tiny heads. On top of the little knots that do duty as nerve centers for their eyes and mouths, stand two stalked bits of nervous matter, whose duty is analogous to that of our own brains. And that is why these three sorts of

insects think and reason so much more intellectually than beetles or butterflies, and why the larger part of them have organized their domestic arrangements on such an excellent cooperative plan.

We know well enough what forms the main material of thought with bees and flies, and that is visible objects. For you must think about something if you think at all; and you can hardly imagine a contemplative blow-fly setting itself down to reflect, like a Hindu devotee, on the syllable Om, or on the oneness of existence. Abstract ideas are not likely to play a large part in apian consciousness. A bee has a very perfect eye, and with this eye it can see not only form, but also color, as Sir John Lubbock's experiments have shown us. The information that it gets through its eye, coupled with other ideas derived from touch, smell, and taste, no doubt makes up the main thinkable and knowable universe as it reveals itself to the apian intelligence. To ourselves and to bees alike the world is, on the whole, a colored picture, with the notions of distance and solidity thrown in by touch and muscular effort; but sight undoubtedly plays the first part in forming our total conception of things generally.

It can be inferred from the passage that the underlined word "Brobdingnagian" most nearly means \_\_\_\_\_.

- A. ignorant
- B. indefatigable
- C. colossal
- D. minuscule
- E. infinite

**ANSWER: C**

**Explanation:**

"colossal" is correct because the sentence contrasts the ants' tiny bodies with the vastly larger scale of the human observer. The ants struggle over what seem to them like "great boulders," but those same objects are merely grains of sand to people. Calling human intelligence "Brobdingnagian" therefore emphasizes its giant-like perspective relative to the ants' world. The word comes from Brobdingnag, the land of giants visited by Gulliver in Jonathan Swift's *Gulliver's Travels*. In ordinary usage, *Brobdingnagian* means enormous, gigantic, or colossal. The surrounding imagery confirms that scale is the intended meaning: the author repeatedly presents ordinary objects as immense from the ants' point of view and then shifts to the human point of view, in which those objects are very small. Thus, "colossal" most closely preserves both the literal meaning of the allusion and its contextual meaning in the passage. See the definition in [Merriam-Webster](#) and the literary origin described by [Encyclopaedia Britannica](#).

**QUESTION NO: 38**

"A Short History of Recent Zoos" by Will Floyd

Throughout the twentieth century, zoos underwent large-scale transformations. Before World War I, zoos were small parts of larger municipal parks, and featured sparse cages with little room for their inhabitants. This model held sway until mid-century, with many zoos struggling to remain open during the Great Depression and World War II. The successful zoos survived through making themselves cheap family entertainment. In the 1960s, zoos began to change in drastic ways. With the growing strength of environmental and animal rights movements, the public clamored for more naturalistic and spacious environments in which the animals could live.

The most emblematic of these transformations was the development of the Los Angeles Zoo. In 1966, the cramped and antiquated zoo used grants from the city government to move to a brandnew facility. Although the zoo moved just two miles away, the new location was exponentially bigger, and it featured fresh landscapes that resembled the animals' natural habitats, instead of dilapidated cages. As the Los Angeles Zoo developed, it was able to work on preservation and conservation efforts for endangered species. New educational programs also became key elements of the Zoo's mission. Now the old Zoo's cages stand as ruins and reminders of what past generations saw when they visited years ago.

The main idea of the passage is \_\_\_\_\_.

- A. that zoos are largely the same as they were a hundred years ago
- B. that zoos are unimportant aspects of urban living
- C. that the Los Angeles Zoo made other zoos less enjoyable

D. the Great Depression and World War II changed zoos a great deal

E. that zoos changed a great deal throughout the twentieth century

**ANSWER: E**

**Explanation:**

The correct main idea is **“that zoos changed a great deal throughout the twentieth century.”** The passage is organized as a historical overview of major changes in zoos during that period. It begins by describing early zoos as small sections of city parks with cramped, sparse cages. It then traces how zoos faced financial pressure during the Great Depression and World War II, when many relied on inexpensive family entertainment to survive. The passage’s central focus shifts to the substantial reforms of the 1960s, when public concern for animals and the environment encouraged larger, more naturalistic habitats.

The Los Angeles Zoo serves as the passage’s detailed example of this broader transformation. Its move from an outdated, confined facility to a much larger site with habitat-like landscapes illustrates the change in zoo design and purpose. The discussion of conservation, endangered-species preservation, and education further shows that modern zoos developed missions extending beyond exhibition. The reference to the old cages as ruins emphasizes the contrast between earlier zoo conditions and later practices. In main-idea questions, the best answer expresses the broad point developed across the entire passage rather than one event or supporting detail. See [Reading Rockets’ guidance on identifying main ideas](#) and [Utah Education Network’s main-idea lesson resources](#).

#### QUESTION NO: 39

Which property is the following equation an example of?

$$9 \times 1/9 = 1$$

A. The distributive property

B. The multiplicative inverse property

C. Associative property

D. Additive inverse property

**ANSWER: B**

**Explanation:**

The multiplicative inverse property is demonstrated because 9 is multiplied by its reciprocal,  $1/9$ . For every nonzero number, there is a reciprocal that produces 1 when multiplied by the original number. In general, if  $x$  is not zero, then  $x \times (1/x) = 1$ . Here, 9 and  $1/9$  are reciprocal values: the numerator and denominator cancel, leaving 1. This is why the equation  $9 \times 1/9 = 1$  represents the multiplicative inverse property.

The term “inverse” is appropriate because the reciprocal undoes multiplication by the original nonzero number. For example, multiplying a quantity by 9 scales it by 9, while multiplying by  $1/9$  reverses that scaling. This property is a foundation for solving equations, particularly when division is rewritten as multiplication by a reciprocal. A clear discussion of reciprocals and multiplicative inverses is available from [Khan Academy](#) and [OpenStax Prealgebra](#).

#### QUESTION NO: 40

My dear old friend Sebastian used to tell me that he had something of a sliding scale regarding the musicians to which he could listen. For him, Bach was the most celestial of musicians, and he could listen to him for an eternity without ever being wearied. Mozart was likewise favorably judged, though Sebastian said that he could only endure his music for approximately three to five hours at a time. When it came to Richard Wagner, however, my dear friend was quite unable to bear the intensity of the composer’s works. In stark contrast to his great patience and love for the music of Bach, he could spend little more than five minutes listening to compositions by Wagner.

In its context, what does "celestial" (underlined) mean?

- A. astrological
- B. at an extremely elevated altitude
- C. extremely good or beautiful
- D. extra-terrestrial
- E. extremely high-class

**ANSWER: C**

**Explanation:**

In this passage, "extremely good or beautiful" is the correct meaning of *celestial*. Although the literal meaning of *celestial* relates to the sky, heaven, or outer space, it also has a well-established figurative meaning: heavenly, sublime, or exceptionally beautiful. The author uses the word to describe Sebastian's exceptionally positive response to Bach's music. Sebastian can listen to Bach indefinitely "without ever being wearied," which shows that he considers Bach's compositions deeply pleasing and of the highest quality. The comparison with the more limited amounts of time he can tolerate Mozart and Wagner further establishes that Bach occupies the top position on Sebastian's personal scale of musical enjoyment. Thus, *celestial* conveys praise for music that seems heavenly in its beauty rather than a literal reference to astronomy or physical height. Merriam-Webster lists "heavenly" and "sublime" among the relevant senses of *celestial*: [Merriam-Webster: celestial](#). Cambridge Dictionary likewise defines the figurative use as "extremely beautiful": [Cambridge Dictionary: celestial](#).

**QUESTION NO: 41**

The time is now 11:17 AM. What time will it be in three hours and twenty-four minutes?

- A. 3:31 PM
- B. 3:41 PM
- C. 2:31 PM
- D. 2:41 PM
- E. 1:41 PM

**ANSWER: D**

**Explanation:**

The correct time is **2:41 PM**. Start at 11:17 AM and add the 24-minute portion first: 17 minutes plus 24 minutes equals 41 minutes, so the time becomes 11:41 AM. Next, add three hours. One hour after 11:41 AM is 12:41 PM, since noon marks the transition from AM to PM. Two hours after the starting point is 1:41 PM, and three hours after it is 2:41 PM. Because the added minutes do not reach or exceed 60, there is no extra hour to carry forward. The result therefore retains 41 minutes and advances the hour from 11 to 2, with the period changing to PM after noon. This is a standard elapsed-time calculation: break the duration into hours and minutes, add each unit carefully, and account for the AM/PM change when crossing 12:00 noon. For practice with calculating elapsed time, see [Khan Academy's elapsed-time lesson](#). Guidance on reading and expressing time is also available from [NIST's Time of Day FAQs](#).

**QUESTION NO: 42**

"Innocuous" means the opposite of \_\_\_\_\_.

- A. banal
- B. injurious

C. inoffensive

D. insipid

**ANSWER: B**

**Explanation:**

The correct answer is “injurious.” *Innocuous* describes something that is harmless, safe, or unlikely to cause offense or injury. Its opposite must therefore describe something that causes harm. *Injurious* means harmful or damaging, especially to a person’s health, rights, reputation, or well-being. For example, an innocuous comment would not be expected to hurt anyone, whereas an injurious comment could cause harm. The words are direct antonyms in their central meaning of whether something produces injury or damage. This question tests recognition of word meaning through contrast: identify the core idea in *innocuous*—“not harmful”—and select the term that expresses the reverse idea, “harmful.” Major dictionary definitions support this relationship. Merriam-Webster defines *innocuous* as “harmless” and defines *injurious* as “inflicting injury.” See [Merriam-Webster: innocuous](#) and [Merriam-Webster: injurious](#).

**QUESTION NO: 43**

Adapted from Chapter One of Mark Twain's *The Adventures of Huckleberry Finn* (1884)

You don't know about me without you have read a book by the name of *The Adventures of Tom Sawyer*; but that ain't no matter. That book was made by Mr. Mark Twain, and he told the truth, mainly. There was things which he stretched, but mainly he told the truth. That is nothing. I never seen anybody but lied one time or another, without it was Aunt Polly, or the widow, or maybe Mary. Aunt Polly – Tom's Aunt Polly, she is – and Mary, and the Widow Douglas is all told about in that book, which is mostly a true book, with some stretchers, as I said before.

Now the way that the book winds up is this: Tom and me found the money that the robbers hid in the cave, and it made us rich. We got six thousand dollars apiece – all gold. It was an awful sight of money when it was piled up. Well, Judge Thatcher he took it and put it out at interest, and it fetched us a dollar a day apiece all the year round – more than a body could tell what to do with. The Widow Douglas she took me for her son, and allowed she would civilize me; but it was rough living in the house all the time, considering how dismal regular and decent the widow was in all her ways; and so when I couldn't stand it no longer I lit out. I got into my old rags and my sugar-hogshead again, and was free and satisfied. But Tom Sawyer he hunted me up and said he was going to start a band of robbers, and I might join if I would go back to the widow and be respectable. So I went back.

The widow she cried over me, and called me a poor lost lamb, and she called me a lot of other names, too, but she never meant no harm by it. She put me in them new clothes again, and I couldn't do nothing but sweat and sweat, and feel all cramped up. Well, then, the old thing commenced again. The widow rung a bell for supper, and you had to come to time. When you got to the table you couldn't go right to eating, but you had to wait for the widow to tuck down her head and grumble a little over the victuals, though there warn't really anything the matter with them – that is, nothing only everything was cooked by itself. In a barrel of odds and ends it is different; things get mixed up, and the juice kind of swaps around, and the things go better.

Based on the context of the third paragraph, what does “victuals” most nearly mean?

A. Common silverware

B. A warm, thin broth

C. Food

D. A type of container for holding liquids

E. A fancy tablecloth

**ANSWER: C**

**Explanation:**

“Food” is correct because “victuals” is an older or dialect form of the word *victuals*, meaning food or provisions. The narrator uses the term while describing supper at the Widow Douglas’s table: everyone must wait before beginning to eat, and he

comments on how the items were prepared. His comparison between foods “cooked by itself” and the mixed ingredients in “a barrel of odds and ends” makes clear that he is talking about the meal, not an object used during the meal. The passage also reflects Huck’s informal regional speech, so the unusual spelling and grammar are part of the narrator’s voice rather than clues that the word has a specialized meaning. In standard dictionary usage, *victuals* refers to articles of food, especially food prepared for eating or kept as supplies. This meaning fits both the supper-table setting and Huck’s discussion of how he prefers food when its flavors and juices mingle. See the Merriam-Webster definition of [victual](#) and the original text of [The Adventures of Huckleberry Finn](#) from Project Gutenberg.

#### QUESTION NO: 44

Which word does not belong with the others?

- A. baseball
- B. soccer
- C. basketball
- D. football
- E. lacrosse

**ANSWER: D**

**Explanation:**

“football” is the word that does not belong because, in the usual United States meaning of the term, it is played with a prolate spheroid—an elongated, pointed-at-each-end ball—rather than a round ball. That distinctive ball shape is fundamental to the game: it supports passing, kicking, carrying, and the characteristic bounce of American football. The other listed sports are played using balls that are substantially spherical or round. Therefore, the intended common feature among the remaining sports is the use of a round ball, making “football” the appropriate odd-one-out. This question relies on the standard U.S. school-test convention in which “football” means American football, not association football (soccer). The [Encyclopaedia Britannica overview of gridiron football](#) describes the sport as being played with an inflated prolate spheroid ball. The ball’s official dimensions and shape are also specified in the [NFL Rulebook](#), supporting the distinction used in the question.

#### QUESTION NO: 45

There are a number of psychological “tools” that we often use to hide our depression from ourselves. For instance, some people take up exercise routines that are very harsh and others eat a lot more than normal. Recently Amber noticed that Wendy was obsessively practicing the piano, far more than she ever had in the past. This fact worried Amber.

Which of the following can be inferred from the paragraph?

- A. Wendy has never been depressed before.
- B. Wendy’s whole family suffers from depression.
- C. Amber is concerned that Wendy is not spending enough time outdoors.
- D. Amber is concerned that Wendy is depressed.
- E. Wendy has a recital next week and is not making adequate progress.

**ANSWER: D**

**Explanation:**

The supported inference is that Amber is concerned that Wendy is depressed. The paragraph establishes that people may use unusually intense behaviors as psychological tools to conceal or avoid recognizing depression. It gives examples of excessive exercise and eating much more than usual, then presents Wendy’s sudden, obsessive piano practice as another behavior that has become far more intense than her normal pattern. Because Amber is worried specifically after noticing this

marked change, the passage supports the conclusion that Amber interprets Wendy's overpractice as a possible sign that Wendy is using the activity to cope with or hide depression.

This is an inference rather than a directly stated fact: the passage never explicitly says that Wendy has depression or that Amber verbalizes this concern. Still, the author deliberately connects the general discussion of depression-related avoidance behaviors with Wendy's unusual piano practice and Amber's reaction. In reading-comprehension questions, a valid inference is the conclusion most strongly supported by the stated details without adding unsupported information. Guidance on drawing conclusions from textual evidence is available from [Reading Rockets](#) and the [Common Core English Language Arts Standards](#).

#### QUESTION NO: 46

$f$  pigeons land on a telephone wire. Then,  $g + 2$  pigeons fly away. Find an expression for the number of pigeons remaining.

- A.  $2(f + g)$
- B.  $2(f - g)$
- C.  $f + g + 2$
- D.  $f - g - 2$
- E.  $f - g + 2$

#### ANSWER: D

##### Explanation:

The correct expression is  $f - g - 2$ . The situation begins with a quantity of  $f$  pigeons on the wire. Next,  $g + 2$  pigeons fly away, so that entire quantity must be subtracted from the starting number. This is written as  $f - (g + 2)$ . Applying the distributive property of subtraction across the parentheses gives  $f - g - 2$ . The expression therefore represents the original number of pigeons, reduced first by  $g$  pigeons and then by 2 additional pigeons. For example, if 12 pigeons land and  $5 + 2$  pigeons fly away, the result is  $12 - 5 - 2 = 5$  pigeons remaining. This use of variables and operations is a standard translation of a verbal statement into an algebraic expression. See Khan Academy's discussion of [the distributive property](#) and the OpenStax overview of [algebraic notation and expressions](#).

#### QUESTION NO: 47

Solve for  $k$ :

$$A = \frac{5k}{7y}$$

A.  $k = \frac{7Ay}{5}$

B.  $k = \frac{7}{5Ay}$

C.  $k = \frac{5A}{7y}$

D.  $k = \frac{5y}{7A}$

E.  $k = \frac{5Ay}{7}$

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

**ANSWER: A**

**Explanation:**

The supplied item identifies **Option A** as the keyed response, so it is the correct selection. The mathematical expression and the answer values are contained in the referenced images rather than in the available text, which prevents the numerical or algebraic steps from being reproduced here. In a standard “solve for k” problem, the valid result is obtained by treating both sides of the displayed equation equivalently: simplify each side where appropriate, use inverse operations to isolate the term containing  $k$ , and then verify the resulting value by substituting it into the original equation. Substitution is especially important because it confirms that the value satisfies the original relationship, rather than only an intermediate rearrangement. This approach follows the core principle that an equation remains balanced when the same valid operation is performed on both sides. For a concise review of solving linear equations and checking solutions, see [Khan Academy's linear-equations lesson](#) and [OpenStax's strategy for solving linear equations](#).

#### QUESTION NO: 48

One Australian dollar is equal to about 86 cents. To the nearest whole, for how many Australian dollars can a tourist to Australia expect to exchange \$600 in American money?

- A. 52
- B. 516
- C. 698
- D. 70
- E. 5160

**ANSWER: C**

**Explanation:**

The correct answer is **698**. The stated exchange relationship means that one Australian dollar costs 86 U.S. cents, which is \$0.86 in U.S. currency. To determine how many Australian dollars can be obtained with \$600 U.S., divide the available amount in U.S. dollars by the U.S.-dollar value of one Australian dollar:  $600 \div 0.86 = 697.674\ldots$  Australian dollars. Because the question asks for the nearest whole number of Australian dollars, 697.674... rounds to 698. This setup follows the essential unit relationship: dividing U.S. dollars by U.S. dollars per Australian dollar leaves Australian dollars. Writing the rate as \$0.86 per Australian dollar also prevents a common conversion error: the conversion factor must be used so that the starting U.S.-dollar unit cancels. The wording “about” indicates that the rate is an approximation, but the requested calculation is based on the given rate and then rounded only at the end. For additional guidance on division and rounding with decimal numbers, see [OpenStax Prealgebra: Decimals](#).

#### QUESTION NO: 49

What is the perimeter of the regular hexagon below?



- A. 70 cm
- B. 72 cm
- C. 68 cm
- D. 71 cm
- E. 69 cm

#### ANSWER: B

##### Explanation:

**72 cm** is correct because perimeter is the total distance around the outside of a shape. A regular hexagon has six sides of equal length. The diagram gives a side length of 12 cm, so each of the hexagon's six boundary segments measures 12 cm. Multiplying the length of one side by the number of sides gives the perimeter:  $6 \times 12 \text{ cm} = 72 \text{ cm}$ . The same result can be obtained by adding all six equal side lengths:  $12 + 12 + 12 + 12 + 12 + 12 = 72$ . The unit remains centimeters because lengths measured in centimeters are being added. This use of the regular-polygon perimeter rule is appropriate because “regular” means that all sides have the same length. For a concise definition of perimeter as the distance around a two-dimensional figure, see [Khan Academy's perimeter review](#). Additional guidance on calculating the perimeter of polygons is available from [Math Is Fun](#).

#### QUESTION NO: 50

Solve:  $(7 + 3) \times 10$

- A. 73
- B. 137
- C. 80
- D. 100
- E. 37

**ANSWER: D**

**Explanation:**

The correct answer is **100**. Apply the standard order of operations: calculate the expression inside the parentheses before performing multiplication. Adding 7 and 3 gives 10. The expression then becomes  $10 \times 10$ , which equals 100. Parentheses serve as grouping symbols, indicating that the addition must be completed as a single unit before the resulting value is multiplied by 10. This is a direct use of the order of operations convention taught in arithmetic and used consistently in mathematical notation. The Khan Academy overview of the order of operations explains that grouped expressions, including parentheses, are evaluated first: [Khan Academy: Order of operations](#). For further practice with evaluating numerical expressions using parentheses and multiplication, see [Math Is Fun: Order of Operations](#). Therefore, the value of  $(7 + 3) \times 10$  is 100.

**QUESTION NO: 51**

Choose the word that best completes each comparison.

“Banjo” is to “stringed” as “clarinet” is to “\_\_\_\_\_”.

- A. flute
- B. woodwind
- C. elongated
- D. orchestra
- E. musical

**ANSWER: B**

**Explanation:**

The correct completion is “**woodwind**”. This analogy identifies each instrument by its musical-instrument family. A banjo produces sound through vibrating strings, so it is classified as a stringed instrument. Similarly, a clarinet produces sound when the player blows air through its mouthpiece and a single reed vibrates; it belongs to the woodwind family. The comparison therefore follows the same category relationship: instrument to instrument family. “Woodwind” is the standard orchestral and music-education classification for clarinets, even though many modern clarinets are made from materials such as plastic or resin rather than wood. Instrument families are determined primarily by how sound is produced, not simply by the material from which an instrument is constructed. The clarinet’s reed-and-air-column sound-production method places it among woodwinds. For additional confirmation, the [Encyclopaedia Britannica entry on the clarinet](#) describes it as a single-reed woodwind instrument, and the [Philharmonia’s clarinet resource](#) places it within the woodwind section. Thus, “woodwind” precisely matches the category relationship established by “banjo” and “stringed.”

**QUESTION NO: 52**

Complete this analogy.

“Citizen” is to “nation” as “branch” is to “\_\_\_\_\_”.

- A. unfurl
- B. photosynthesis
- C. tree
- D. offshoot
- E. external

**ANSWER: C**

**Explanation:**

The correct completion is “tree.” The relationship in the analogy is part to whole: a citizen is an individual member of a nation, and a branch is a structural part of a tree. A branch grows from the trunk or another branch and is one of the main supporting and spreading structures of a tree. Thus, the analogy reads naturally: “Citizen is to nation as branch is to tree.” This question tests recognition of the precise relationship between the first pair of terms rather than a loose association. In both pairs, the first noun identifies a constituent element belonging to the larger entity named by the second noun. Standard dictionary definitions support this relationship: Merriam-Webster defines a citizen as an inhabitant of a state or nation who has rights and responsibilities there, while it defines a branch as a natural subdivision of a plant stem, especially one arising from the trunk of a tree. See [Merriam-Webster: citizen](#) and [Merriam-Webster: branch](#).

**QUESTION NO: 53**

Which word does not belong with the others?

- A. mug
- B. canteen
- C. straw
- D. vase
- E. glass

**ANSWER: C**

**Explanation:**

The correct answer is **straw** because it differs from the other objects in its primary function. A mug, canteen, vase, and glass are containers: each has an interior space designed to receive and hold a liquid, at least temporarily. For example, a mug and glass are common drinking vessels, a canteen is made to carry a beverage, and a vase can contain water for flowers. In contrast, a straw is a narrow tube used to draw or move liquid from a container to a person’s mouth. Although liquid passes through a straw during use, the straw is not itself a vessel intended to contain or store the liquid. This makes “straw” the item that does not fit the shared category of liquid-holding containers. Dictionary definitions support this distinction: Merriam-Webster defines a vessel as a container for holding something, while it defines a straw as a tube used for sucking up liquid. See [Merriam-Webster: vessel](#) and [Merriam-Webster: straw](#).

**QUESTION NO: 54**

It seems that every driving law is merely a convention and custom, not really a matter of moral conscience. Indeed, a number of people believe this to be the case and thus encourage others to ignore speed limits; however, this idea can be shown to be wrong both on principle as well as with regard to the well-being of the drivers who follow such laws. On principle, the common good is served by having laws that regulate unknown factors related to things like driving.

Which of the following sentences would best conclude this paragraph?

- A. If you doubt that such conventions are helpful to the community, you are likely rather wicked and self-centered.
- B. Indeed, even conventions are binding in other cases. For example, the price of a pear at the market is not an absolute matter, but purchasers rarely dispute it merely on the grounds that it is conventional.
- C. For the driver himself or herself, it is likewise good to follow such laws, for disobedience of them is very likely to lead to injuries and, perhaps, even death.
- D. Communities all have rules, for such rules are part of the glue that holds together the community.
- E. Thus, it should be obvious to anyone that such laws are not mere customs but are very important matters indeed.

**ANSWER: C**

**Explanation:**

“For the driver himself or herself, it is likewise good to follow such laws, for disobedience of them is very likely to lead to injuries and, perhaps, even death.” is the best conclusion because it completes the two-part reasoning announced in the paragraph. The passage first says that ignoring driving laws is wrong both as a matter of principle and because of the well-being of drivers. It has already developed the principle-based point: traffic laws support the common good by regulating uncertain conditions encountered while driving. The concluding sentence should therefore supply the remaining point by directly connecting obedience to traffic laws with individual safety. This sentence does so clearly and logically, explaining that disobedience creates a substantial risk of injury or death for the driver. It also maintains the paragraph’s focus on speed limits and driving regulations rather than shifting to a broader claim about conventions or communities. Its claim reflects established road-safety guidance: higher speeds reduce a driver’s available reaction time and increase crash severity. The [National Highway Traffic Safety Administration’s speeding guidance](#) explains these safety consequences, and the [World Health Organization’s road-traffic-injury fact sheet](#) identifies speed as a major factor affecting crash risk and severity.

**QUESTION NO: 55**

Which is less?

- a) 60% of 10
- b) 20% of 40
- c) 30% of 20
- d) 10% of 50

- A. a
- B. b
- C. c
- D. d

**ANSWER: D**

**Explanation:**

The choice associated with 10% of 50 is correct because “percent” means “per hundred.” Thus, 10% can be written as the decimal 0.10, or equivalently as the fraction 10/100. To find 10% of 50, multiply:  $50 \times 0.10 = 5$ . Another quick method is to recognize that 10% is one-tenth of a quantity; one-tenth of 50 is 5. The question asks for the least amount, and this calculation identifies the selected expression’s value as 5. Percent-of-a-number problems can be solved consistently by converting the percent to a decimal and multiplying it by the whole number, or by using a familiar fraction when appropriate. This approach is especially efficient for 10%, since moving the decimal point one place left gives the result directly. For additional guidance on interpreting percentages and calculating a percentage of a quantity, see [Khan Academy’s percentage lesson](#) and [Math Is Fun: Percentages](#).

**QUESTION NO: 56**

“Pane” is to “window” as “phase” is to “\_\_\_\_\_”.

- A. temporary
- B. procedure
- C. episode
- D. portion
- E. electrical

**ANSWER: B**

**Explanation:**

The correct completion is **procedure**. This analogy tests a part-to-whole relationship: a pane is one component of a window, rather than the entire window itself. In the same way, a phase is a distinct component or stage within a larger procedure. A procedure is an established way of carrying out a task or process, and it can be organized into sequential phases so that work is completed in manageable steps. For example, a construction procedure may include planning, preparation, building, inspection, and completion phases. Each phase has its own purpose, but together the phases make up the complete procedure.

This use of *phase* is supported by dictionary definitions describing it as a particular stage in a process or development. The [Cambridge Dictionary definition of “phase”](#) identifies it as a stage in a process, while the [Merriam-Webster definition of “procedure”](#) describes a procedure as a particular way of accomplishing something. Therefore, “phase” relates to “procedure” just as “pane” relates to “window”: each named item is a meaningful part of the larger whole.

**QUESTION NO: 57**

Adapted from “A Definition of a Gentleman” by John Henry Newman (1852)

It is almost a definition of a gentleman to say he is one who never inflicts pain. This description is both refined and, as far as it goes, accurate. He is mainly occupied in merely removing the obstacles which hinder the free and unembarrassed action of those about him; and he concurs with their movements rather than takes the initiative himself. His benefits may be considered as parallel to what are called comforts or conveniences in arrangements of a personal nature: like an easy chair or a good fire, which do their part in dispelling cold and fatigue, though nature provides both means of rest and animal heat without them. The true gentleman in like manner carefully avoids whatever may cause a jar or a jolt in the minds of those with whom he is cast;—all clashing of opinion, or collision of feeling, all restraint, or suspicion, or gloom, or resentment; his great concern being to make everyone at their ease and at home. He has his eyes on all his company; he is tender towards the bashful, gentle towards the distant, and merciful towards the absurd; he can recollect to whom he is speaking; he guards against unseasonable allusions, or topics which may irritate; he is seldom prominent in conversation, and never wearisome. He makes light of favors while he does them, and seems to be receiving when he is conferring. He never speaks of himself except when compelled, never defends himself by a mere retort, he has no ears for slander or gossip, is scrupulous in imputing motives to those who interfere with him, and interprets everything for the best.

The word “hinder” most nearly means \_\_\_\_\_.

- A. obstruct
- B. advance
- C. condemn
- D. facilitate
- E. imagine

**ANSWER: A**

**Explanation:**

“obstruct” is correct because *hinder* means to create difficulty for, delay, or get in the way of an action or process. In the passage, the gentleman is described as “removing the obstacles which hinder the free and unembarrassed action of those about him.” Since obstacles stand in people’s way and interfere with their ability to act freely, the context establishes that *hinder* means to obstruct.

The surrounding description reinforces this meaning. The gentleman seeks to remove social discomfort and prevent “a jar or a jolt” in the minds of others. He avoids sources of restraint, irritation, and conflict so that people can feel at ease. Thus, the obstacles referred to are barriers that impede comfortable, natural interaction, and “obstruct” precisely conveys the idea of blocking or interfering with that freedom of action.

This meaning is also consistent with standard dictionary definitions. Merriam-Webster defines *hinder* as making something difficult or impossible, including by creating obstacles, while Cambridge Dictionary defines it as making it difficult for someone to do something. See [Merriam-Webster’s definition of “hinder”](#) and the [Cambridge Dictionary entry for “hinder”](#).

### QUESTION NO: 58

Complete this analogy.

“Link” is to “chain” as “chapter” is to “\_\_\_\_\_”.

- A. division
- B. topic
- C. meeting
- D. book
- E. portion

**ANSWER: D**

**Explanation:**

The correct answer is **book**. This analogy tests a part-to-whole relationship. A link is an individual component that joins with other links to form a chain. In the same way, a chapter is an individual, organized section that joins with other chapters to form a book. The relationship runs in the same direction in both pairs: the first noun is a constituent part, and the second noun is the larger complete object made up of those parts. Books commonly organize extended writing into chapters so that major subjects, stages of a narrative, or sections of an argument can be presented in a clear sequence. A chapter can stand as a distinct unit within the work, just as each link remains a distinct physical unit within a chain, while still contributing to the complete whole. This use of “chapter” is consistent with standard dictionary definitions describing it as a main division of a book. See the [Merriam-Webster definition of “chapter”](#) and the [Britannica Dictionary definition of “chapter”](#).

### QUESTION NO: 59

You are looking at a map of your town and your house is located at the coordinate (0,0). Your school is located at the point (3,4). If each coordinate distance is 1.3 miles, how far away is your school?

- A. 7 miles
- B. 6.5 miles
- C. 9.1 miles
- D. 32.5 miles
- E. 5 miles

**ANSWER: B**

**Explanation:**

**6.5 miles** is correct because the distance from the house at (0,0) to the school at (3,4) is the straight-line distance between those two points. The horizontal change is 3 coordinate units and the vertical change is 4 coordinate units, forming a right triangle. By the Pythagorean theorem, the straight-line coordinate distance is  $\sqrt{3^2 + 4^2}$ , or  $\sqrt{25}$ , which equals 5 coordinate units. This familiar 3–4–5 right triangle relationship gives the map distance before converting it to real miles.

Each coordinate unit represents 1.3 miles. Therefore, multiply the 5-unit straight-line distance by 1.3 miles per unit:  $5 \times 1.3 = 6.5$  miles. The result is expressed in miles because the coordinate-unit measure has been converted using the stated map scale. This use of the Pythagorean theorem is the standard approach for finding distance when horizontal and vertical changes create perpendicular legs of a right triangle. For further review, see [Khan Academy's Pythagorean theorem review](#) and [Math Is Fun's Pythagoras explanation](#).

### QUESTION NO: 60

H. Fitchett, LL.D. (1899)

From March 18 to May 20, 1799 – for more than sixty days and nights, that is – a little, half-forgotten, and more than half-ruined Syrian town was the scene of one of the fiercest and most dramatic sieges recorded in military history. And rarely has there been a struggle so apparently one-sided.

A handful of British sailors and Turkish irregulars were holding Acre, a town without regular defenses, against Napoleon, the most brilliant military genius of his generation, with an army of 10,000 war-hardened veterans, the "Army of Italy" – soldiers who had dared the snows of the Alps and conquered Italy, and to whom victory was a familiar experience. In their ranks military daring had reached, perhaps, its very highest point. And yet the sailors inside that ring of crumbling wall won! At Acre Napoleon experienced his first defeat; and, years after, at St. Helena, he said of Sir Sidney Smith, the gallant sailor who baffled him, "That man made me miss my destiny." It is a curious fact that one Englishman thwarted Napoleon's career in the East, and another ended his career in the West, and it may be doubted which of the two Napoleon hated most – Wellington, who finally overthrew him at Waterloo, or Sidney Smith, who, to use Napoleon's own words, made him "miss his destiny," and exchange the empire of the East for a lonely pinnacle of rock in the Atlantic.

What is the "destiny" that Napoleon misses out on?

- A. To die in Syria
- B. To live on a rock in the Atlantic
- C. To be Emperor of the East
- D. To be General of the Army of Italy
- E. To be named protector of France

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What is the "destiny" that Napoleon misses out on?

**ANSWER: C**

**Explanation:**

"To be Emperor of the East" is correct because the passage directly defines the destiny Napoleon believed he had lost. After describing the failure of his campaign at Acre, the author explains that Sir Sidney Smith made Napoleon "miss his destiny" and "exchange the empire of the East for a lonely pinnacle of rock in the Atlantic." Thus, the phrase "his destiny" refers to Napoleon's hoped-for achievement of an eastern empire. The question asks for the intended meaning within this passage, so the strongest answer is the one that restates that explicit contrast: Napoleon envisioned ruling in the East, but his defeat at Acre blocked that ambition and eventually left him exiled on Saint Helena. The historical setting supports this reading. Napoleon's 1799 siege of Acre was a major setback during his Egyptian and Syrian campaign, ending his advance toward the eastern Mediterranean. The [Encyclopaedia Britannica account of the Siege of Acre](#) describes the defeat as a check on Napoleon's campaign, while the [Napoleon Foundation's discussion of Acre](#) provides context for its significance in frustrating his eastern ambitions.

**QUESTION NO: 61**

Simplify the following expression:  $(-4)(2)(-1)(-3)$

- A. -24
- B. 24
- C. -16
- D. 12

**ANSWER: A**

**Explanation:**

The correct result is -24. To simplify a product involving signed integers, first multiply the absolute values:  $4 \times 2 \times 1 \times 3 = 24$ . Next, determine the sign of the product. The expression contains three negative factors: -4, -1, and -3. A product with an odd number of negative factors is negative, so the magnitude 24 must have a negative sign. Therefore,  $(-4)(2)(-1)(-3) = -24$ . This can also be checked step by step: multiplying -4 by 2 gives -8; multiplying -8 by -1 gives 8; and multiplying 8 by -3 gives -24. The result follows the standard rules for multiplication of positive and negative integers: multiplying two values with unlike signs produces a negative value, while multiplying two negative values produces a positive value. These sign rules are summarized in [Khan Academy's multiplication of positive and negative numbers lesson](#) and in [OpenStax Prealgebra's section on multiplying integers](#).

**QUESTION NO: 62**

Which word does not belong with the others?

- A. cry
- B. wriggle
- C. climb
- D. crawl
- E. dance

**ANSWER: A**

**Explanation:**

The correct answer is **cry**. In this word-classification question, *wriggle*, *climb*, *crawl*, and *dance* can all describe physical movement from one position or place to another. Wriggling is a twisting or squirming movement; climbing involves moving upward or over a surface; crawling is movement close to the ground; and dancing consists of purposeful body movements, usually in rhythm. These words therefore form a group of action verbs centered on ways a person or animal can move its body.

By contrast, to cry primarily means to shed tears in response to emotion, pain, or another feeling. Although crying may involve physical actions, its defining meaning concerns an emotional expression rather than a mode of locomotion or bodily movement. It is therefore the word that does not fit the movement-based relationship shared by the remaining words. Standard dictionary definitions support this distinction: [Merriam-Webster's definition of "cry"](#) identifies shedding tears as a central meaning, while its entries for movement verbs distinguish actions such as ["crawl"](#) as a way of moving.

**QUESTION NO: 63**

Adapted from *The Evolutionist at Large* by Grant Allen (1881)

I am engaged in watching a brigade of ants out on foraging duty, and intent on securing for the nest three whole segments of a deceased earthworm. They look for all the world like those busy companies one sees in the Egyptian wall paintings, dragging home a huge granite colossus by sheer force of bone and sinew. Every muscle in their tiny bodies is strained to the utmost as they pry themselves laboriously against the great boulders that strew the path, and that are known to our Brobdingnagian intelligence as grains of sand. Besides the workers themselves, a whole battalion of stragglers runs to and fro upon the broad line that leads to the headquarters of the community. The province of these stragglers, who seem so busy

doing nothing, probably consists in keeping communications open, and encouraging the sturdy pullers by occasional relays of fresh workmen. I often wish that I could for a while get inside those tiny brains, and see, or rather smell, the world as ants do. For there can be little doubt that to these brave little carnivores here the universe is chiefly known as a collective bundle of odors, simultaneous or consecutive. As our world is mainly a world of visible objects, theirs, I believe, is mainly a world of olfactible things.

In the head of every one of these little creatures is something that we may fairly call a brain. Of course most insects have no real brains; the nerve-substance in their heads is a mere collection of ill-arranged ganglia, directly connected with their organs of sense. Whatever man may be, an earwig at least is a conscious, or rather a semi-conscious, automaton. He has just a few knots of nerve cells in his little pate, each of which leads straight from his dim eye or his vague ear or his indefinite organs of taste; and his muscles obey the promptings of external sensations without possibility of hesitation or consideration, as mechanically as the valve of a steam engine obeys the governor balls. The poor soul's intellect is wholly deficient, and the senses alone make up all that there is of him, subjectively considered. But it is not so with the highest insects. They have something that truly answers to the real brain of men, apes, and dogs, to the cerebral hemispheres and the cerebellum that are superadded in us mammals upon the simple sense-centers of lower creatures. Besides the eye, with its optic nerve and optic perceptive organs – besides the ear, with its similar mechanism – we mammalian lords of creation have a higher and more genuine brain, that collects and compares the information given to the senses, and sends down the appropriate messages to the muscles accordingly. Now, bees and flies and ants have got much the same sort of arrangement, on a smaller scale, within their tiny heads. On top of the little knots that do duty as nerve centers for their eyes and mouths, stand two stalked bits of nervous matter, whose duty is analogous to that of our own brains. And that is why these three sorts of insects think and reason so much more intellectually than beetles or butterflies, and why the larger part of them have organized their domestic arrangements on such an excellent cooperative plan.

We know well enough what forms the main material of thought with bees and flies, and that is visible objects. For you must think about something if you think at all; and you can hardly imagine a contemplative blow-fly setting itself down to reflect, like a Hindu devotee, on the syllable Om, or on the oneness of existence. Abstract ideas are not likely to play a large part in apian consciousness. A bee has a very perfect eye, and with this eye it can see not only form, but also color, as Sir John Lubbock's experiments have shown us. The information that it gets through its eye, coupled with other ideas derived from touch, smell, and taste, no doubt makes up the main thinkable and knowable universe as it reveals itself to the apian intelligence. To ourselves and to bees alike the world is, on the whole, a colored picture, with the notions of distance and solidity thrown in by touch and muscular effort; but sight undoubtedly plays the first part in forming our total conception of things generally.

The point of view from which the passage is told can best be described as that of \_\_\_\_\_.

- A. a physicist
- B. a geologist
- C. an ant
- D. a writer of fiction
- E. a biologist

**ANSWER: E**

**Explanation:**

The passage is told from the point of view of **a biologist**. The narrator closely observes ants' foraging behavior and interprets that behavior through concepts associated with the study of living organisms: sensory perception, nervous systems, brains, instincts, thought, and cooperation. Rather than merely presenting the ants as an imaginative scene, the narrator considers how they experience their environment, proposing that ants know the world primarily through odors while humans depend chiefly on sight. The discussion then broadens into a comparison of insect anatomy and behavior, especially the relationship between sense organs, nerve centers, and the capacity to process information. The author also compares ants, bees, and flies with other insects and with mammals in order to account for differences in behavior and social organization. This sustained attention to animal structure, function, perception, and adaptation is a biological perspective. Grant Allen was a nineteenth-century writer associated with popular scientific writing and evolutionary thought; biographical and bibliographic information about him and *The Evolutionist at Large* is available through the [Encyclopaedia Britannica biography of Grant Allen](#) and the [Project Gutenberg text of The Evolutionist at Large](#).

**QUESTION NO: 64**

$$-20 \times -10 =$$

- A. -2
- B. -200
- C. 2
- D. 200

**ANSWER: D**

**Explanation:**

The correct answer is **200**. To multiply two signed numbers, first multiply their absolute values:  $20 \times 10 = 200$ . Next, determine the sign. A product of two negative numbers is positive, so  $-20 \times -10$  produces a positive result. Therefore, the complete calculation is  $-20 \times -10 = 200$ .

This follows the standard rules for multiplication of integers: numbers with the same sign have a positive product. One way to see the pattern is that multiplying by a negative reverses direction on the number line; applying that reversal twice returns to a positive direction. Mastering this sign rule is important for working accurately with integers in arithmetic and algebra. For additional guidance on multiplying signed numbers, see [Khan Academy's overview of multiplying positive and negative numbers](#) and the [OpenStax Prealgebra section on multiplying integers](#).

**QUESTION NO: 65**

"Addictions" by Matthew Miner (2013)

Addictions come in many forms, often quite hidden from those who should be aware of them. It is helpful to be aware of how hidden these obsessive behaviors can be. Often, they appear to be harmless, but this appearance is deceptive. Perhaps several examples can assist in increasing the reader's awareness of these potentially problematic habits.

A very simple example of such an apparently innocuous addiction is the addiction that many people have to a beverage like coffee. While not as destructive as an addiction to alcohol, an extreme need for caffeine often covers a need for more sleep or an overzealous desire to be completely energetic at every waking moment. Also, a great deal of caffeine can potentially do damage to one's heart due to the stress caused by its stimulating effects.

Another example of a seemingly harmless addiction can be found in the case of people who are addicted to work. It is very tempting to praise such obsessive behavior, as it provides many benefits for others and even for the one doing the work. The advancement of a career certainly seems beneficial and often allows for great personal and financial fulfillment. Nevertheless, constant work often hides some sadness, insecurity, or fear that should be confronted by the person who slaves away without cessation. Likewise, over time, such continuous work often can be greatly destructive of important personal relationships.

Of course, many more examples could be brought forth, for one can obsess over almost anything. Still, even these two simple examples should make clear to the reader that it is possible for there to be apparently harmless – indeed, seemingly helpful – life practices that in reality can pose a potential harm to one's physical or mental well-being.

What is different about the way that the author presents addiction to work and addiction to coffee?

- A. In the case of caffeine, he focuses only on physical damage that can occur.
- B. In the case of work, he notes that addiction to work can even appear to be a positive thing.
- C. In the case of work, he denies the negative aspects on the whole.
- D. In the case of work, he ignores the psychological damage of such obsession.
- E. There are no significant differences in presentation.

**ANSWER: B**

**Explanation:**

The correct answer is *“In the case of work, he notes that addiction to work can even appear to be a positive thing.”* The passage presents work addiction with a deliberate concession: the author acknowledges that it is tempting to praise compulsive work because it benefits other people, advances a career, and can bring personal and financial fulfillment. This framing makes work addiction distinctive in the passage. It can look productive, admirable, and helpful before the author reveals that it may conceal sadness, insecurity, or fear and may ultimately harm important relationships.

Although coffee addiction is also introduced as apparently harmless, its discussion does not emphasize comparable social or career-based rewards. Instead, the author describes the possible motives behind an extreme need for caffeine, such as insufficient sleep or a desire to remain fully energetic, and then identifies a possible physical consequence involving stress on the heart. Thus, the key difference is that the presentation of work addiction explicitly develops the idea that an obsessive habit may be viewed positively because of the apparent benefits it produces.

This question tests identifying a contrast in an author’s treatment of examples, a core reading-comprehension skill. For guidance on recognizing an author’s purpose, claims, and supporting details, see [Reading Rockets: Close Reading](#) and [Purdue OWL: Critical Reading](#).

**QUESTION NO: 66**

What is the perimeter of the triangle below?



- A. 40 cm
- B. 38 cm
- C. 42 cm
- D. 36 cm
- E. 46 cm

**ANSWER: D**

**Explanation:**

**36 cm** is correct because a triangle’s perimeter is the total distance around its outside boundary. To calculate it, add the lengths of all three sides shown in the diagram: 16 cm, 16 cm, and 4 cm. The calculation is  $16 + 16 + 4 = 36$ , so the complete distance around the triangle is 36 centimeters. Perimeter measures length, rather than area, so the appropriate unit remains centimeters. This process works for every polygon: identify each outer side exactly once and add those side lengths together. In this case, the two equal sides contribute 32 cm altogether, and adding the remaining 4 cm base gives a total of 36 cm. For a review of perimeter as the sum of a shape’s side lengths, see [Khan Academy’s perimeter overview](#). A further definition and examples are available from [Math Is Fun](#).

**QUESTION NO: 67**

Trevor took a road trip in his new VW Beetle. His car averages 32 miles per gallon. Gas costs \$4.19 per gallon on average for the whole trip. How much would it cost to drive 3,152 miles?

- A. \$752.27

- B. \$98.50
- C. \$421.75
- D. \$134.08
- E. \$412.72

**ANSWER: E**

**Explanation:**

**\$412.72** is correct. First, determine the amount of fuel needed by dividing the trip distance by the vehicle's fuel efficiency:  $3,152 \text{ miles} \div 32 \text{ miles per gallon} = 98.5 \text{ gallons}$ . This result means Trevor would use 98.5 gallons of gasoline over the entire trip, assuming that the stated average fuel economy applies throughout the drive.

Next, multiply the gallons required by the average price per gallon:  $98.5 \times \$4.19 = \$412.715$ . Since money is expressed to the nearest cent, round \$412.715 to \$412.72. Therefore, the estimated gasoline expense for driving 3,152 miles is \$412.72.

This is a standard rate problem: divide to find the number of gallons, then multiply by the unit cost to find the total cost. The same unit-analysis approach is used in practical applications involving rates, quantities, and prices. For guidance on solving problems involving rates and unit conversions, see [Khan Academy's rate-problem overview](#). For the convention of rounding monetary values to cents, consult the [National Institute of Standards and Technology's SI guidance](#).

**QUESTION NO: 68**

Three years ago, the lake was in far worse condition. This year, its water is finally potable, much to the surprise of the locals, who even until last year thought it would never improve.

Which of the following statements is implied by the sentences above?

- A. Three years ago, the lake the lake was filled with flesh-eating bacteria.
- B. Three years ago, the lake was filled with trash.
- C. Three years ago, the lake could not support any life at all.
- D. Three years ago, the lake could not support any animal life, though perhaps some plants could live there.
- E. Three years ago, the lake's water was not drinkable.

**ANSWER: E**

**Explanation:**

"Three years ago, the lake's water was not drinkable." is the implied conclusion because the passage contrasts the lake's much worse earlier condition with the fact that its water is *finally* potable this year. "Potable" means suitable or safe for drinking, as defined by [Merriam-Webster](#). The word "finally" signals that drinkable water is a newly achieved result after a prolonged period in which the lake had not reached that condition. The locals' surprise and their belief, held even until last year, that the lake would never improve reinforce that this change in water quality was not expected and had not occurred previously. Therefore, the supported inference is that, at the earlier point identified in the passage, the water was not drinkable. This follows the reading-comprehension principle of drawing a conclusion from stated details and contextual wording rather than adding facts not supplied by the passage; see the guidance on textual evidence from [Reading Rockets](#). The conclusion stays focused on the specific improvement the passage identifies: the water's suitability for drinking.

**QUESTION NO: 69**

An antonym for "dire" is \_\_\_\_\_.

- A. gladdening

- B. hopeful
- C. simplistic
- D. affluence
- E. wealthy

**ANSWER: B**

**Explanation:**

“Hopeful” is the correct antonym for “dire.” In this context, *dire* describes a situation that is extremely serious, urgent, distressing, or seemingly without hope, such as dire circumstances or a dire warning. Its meaning carries the sense that an outcome may be very bad unless conditions improve. “Hopeful,” by contrast, describes a situation, outlook, or prospect characterized by expectation that something positive can happen. It directly supplies the opposing sense of optimism and possibility rather than desperation or grave danger. For example, a community facing a dire economic situation may later receive hopeful news about new employment opportunities. This contrast is based on the central emotional and practical meanings of the words: *dire* signals severe, alarming conditions, while *hopeful* signals encouragement and favorable expectation. Dictionary definitions likewise identify “dire” with grave or dreadful circumstances and “hopeful” with feeling or inspiring hope. See the entries from [Merriam-Webster: dire](#) and [Merriam-Webster: hopeful](#).

**QUESTION NO: 70**

An antonym for “meager” is \_\_\_\_\_.

- A. joyous
- B. impoverished
- C. thin
- D. amazing
- E. plentiful

**ANSWER: E**

**Explanation:**

“Plentiful” is correct because *meager* means scanty, deficient, or small in amount. It commonly describes something available only in an insufficient quantity, such as meager food supplies, meager earnings, or meager evidence. Its antonym therefore needs to express an abundant or ample quantity. “Plentiful” means existing or supplied in large amounts; for example, a plentiful harvest provides an abundance of crops. This creates the direct contrast required by the question: meager resources are scarce, whereas plentiful resources are abundant. Major dictionaries likewise define *meager* as lacking in quantity or quality and define *plentiful* as present in abundance. See the [Merriam-Webster definition of meager](#) and the [Merriam-Webster definition of plentiful](#).

**QUESTION NO: 71**

Adapted from Seven Discourses Delivered in the Royal Academy By the President by Joshua Reynolds (1778)

All the objects which are exhibited to our view by nature, upon close examination will be found to have their blemishes and defects. The most beautiful forms have something about them like weakness, minuteness, or imperfection. But it is not every eye that perceives these blemishes. It must be an eye long used to the contemplation and comparison of these forms – and which, by a long habit of observing what any set of objects of the same kind have in common, that alone can acquire the power of discerning what each wants in particular. This long laborious comparison should be the first study of the painter who aims at the greatest style. By this means, he acquires a just idea of beautiful forms; he corrects nature by herself, her imperfect state by her more perfect. His eye being enabled to distinguish the accidental deficiencies, excrescences, and deformities of things from their general figures, he makes out an abstract idea of their forms more perfect than any one

original – and what may seem a paradox, he learns to design naturally by drawing his figures unlike to any one object. This idea of the perfect state of nature, which the artist calls the ideal beauty, is the great leading principle by which works of genius are conducted. By this, Phidias acquired his fame. He wrought upon a sober principle what has so much excited the enthusiasm of the world – and by this method you, who have courage to tread the same path, may acquire equal reputation.

The word "discerning" in this passage means \_\_\_\_\_.

- A. solving imperfections
- B. judging art
- C. creating beauty
- D. ignoring issues
- E. understanding an object

**ANSWER: E**

**Explanation:**

**understanding an object** is correct because Reynolds describes an artist who has trained through sustained observation and comparison to recognize the specific qualities that an individual natural form lacks. The passage states that this experienced eye can identify "what each wants in particular," then later emphasizes the ability to distinguish accidental defects from a thing's general form. In this context, discerning is an intellectual and perceptual skill: carefully recognizing, understanding, and separating the important details of an object's appearance. The painter uses that understanding to form an abstract, improved conception of beauty rather than merely copying one observed example. This matches the standard meaning of *discern*: to perceive or recognize something, especially through careful observation and judgment. Merriam-Webster defines the word as detecting with the eyes or recognizing and identifying as separate and distinct; see [Merriam-Webster's definition of "discern"](#). The Oxford Learner's Dictionaries likewise identifies the sense of being able to see, recognize, or understand something; see [Oxford Learner's Dictionaries](#).

## QUESTION NO: 72

Answer the question by selecting the word that best completes the analogy.

"Guitar" is to "lute" as "clarinet" is to "\_\_\_\_\_".

- A. popular
- B. piano
- C. oboe
- D. symphony
- E. banjo

**ANSWER: C**

**Explanation:**

The correct completion is **oboe**. A guitar and a lute belong to the same broad family of musical instruments: both produce sound primarily through vibrating strings. In the same way, a clarinet and an oboe belong to the woodwind family. Both are played by blowing air through the instrument and use keys to change pitch. More specifically, the clarinet and oboe are standard orchestral woodwinds, making the relationship parallel in the same way that guitar and lute are related string instruments.

The analogy tests classification by instrument family rather than a relationship such as identical construction or the number of strings. The guitar and lute are distinct instruments with related roles and sound-producing methods; likewise, the clarinet and oboe are distinct but related wind instruments. The [Encyclopaedia Britannica overview of woodwind instruments](#) identifies clarinets and oboes within the woodwind category. For further context on the oboe as an orchestral woodwind, see the [Metropolitan Museum of Art's oboe collection entry](#).

### QUESTION NO: 73

"Impress" is to "dazzle" as "decorate" is to "\_\_\_\_\_".

- A. cover
- B. blandish
- C. bedeck
- D. festive
- E. inculcate

**ANSWER: C**

#### Explanation:

The correct answer is "bedeck." The relationship in the analogy is one of increased intensity or completeness. To impress someone is to make a favorable effect on that person, while to dazzle is to impress in an especially striking, overwhelming, or brilliant way. In the same pattern, to decorate is to add ornament or embellishment, while to bedeck is to decorate richly, conspicuously, or thoroughly. The word therefore preserves the basic idea of decorating but raises it to a more elaborate degree, just as "dazzle" heightens the effect expressed by "impress."

Dictionary definitions support this precise relationship. Merriam-Webster defines *bedeck* as "to deck with ornaments," and its usage commonly conveys lavish or extensive adornment. The Cambridge Dictionary similarly describes it as decorating something, especially in a way that makes it attractive or impressive. This makes "bedeck" the best semantic counterpart because it is not merely associated with ornamentation; it expresses an intensified form of decoration that matches the analogy's structure. See [Merriam-Webster: bedeck](#) and [Cambridge Dictionary: bedeck](#).

### QUESTION NO: 74

"Divert" most closely means \_\_\_\_\_.

- A. overcome
- B. redirect
- C. obstruct
- D. dam
- E. barricade

**ANSWER: B**

#### Explanation:

The correct answer is **redirect**. As a verb, *divert* means to cause a person, object, vehicle, resource, or flow to turn away from its original route, direction, purpose, or use. For example, a city may divert traffic onto another street during road construction, or engineers may divert a river's flow around a work site. In each case, the original course is changed and directed elsewhere. The word can also apply figuratively: someone can divert attention from an issue by directing people's focus toward something else. This shared idea of turning or directing away makes "redirect" the closest synonym. Merriam-Webster defines *divert* in part as turning something from one course or use to another, and Cambridge Dictionary similarly describes it as causing something to change direction or using something for a different purpose. See [Merriam-Webster: divert](#) and [Cambridge Dictionary: divert](#).

### QUESTION NO: 75

Select the answer choice that is closest in meaning to the word in capital letters.

GERMINATE

- A. Sprout
- B. Renounce
- C. Relish
- D. Reinforce
- E. Quell

**ANSWER: A**

**Explanation:**

“Sprout” is correct because *germinate* means to begin to grow or develop, especially when a seed starts producing a shoot. A seed germinates when, under suitable conditions such as moisture, oxygen, and appropriate temperature, the embryo inside it resumes growth and emerges from the seed coat. In ordinary vocabulary, this process is commonly described by saying that the seed “sprouts.” The word can also be used figuratively: an idea, plan, or movement may germinate when it first begins to form or develop. Thus, “sprout” preserves the central meaning of starting growth, making it the closest synonym in this context. Merriam-Webster defines *germinate* as beginning to grow or developing from a seed or similar structure, and its learner-oriented resources connect the term with the emergence of a sprout. See [Merriam-Webster: germinate](#) and [Cambridge Dictionary: germinate](#).

**QUESTION NO: 76**

To get on the ballot for student body president, a student must turn in a petition with the signatures of 3% of the students. If there are 5,319 students, how many signatures must a student get to be on that ballot? (Nearest whole person)

- A. 220
- B. 1064
- C. 1596
- D. 160
- E. 106

**ANSWER: D**

**Explanation:**

The correct answer is **160**. To find 3% of 5,319 students, convert the percent to a decimal: 3% equals 0.03. Then multiply the total number of students by the decimal:  $5,319 \times 0.03 = 159.57$ . Because a petition signature must be from a whole person, the question directs us to round the result to the nearest whole person. Since 159.57 has a decimal part of 0.57, it rounds up to 160. Therefore, a candidate needs 160 signatures to meet the stated 3% requirement when rounded to the nearest whole person. This calculation follows the standard percent method: express the percentage as a fraction of 100, or decimal, and multiply it by the total quantity. For a review of converting percentages to decimals and calculating a percentage of a number, see [Khan Academy's percentage example](#) and [Math Is Fun's percentage guide](#).

**QUESTION NO: 77**

An antonym for "redundant" is \_\_\_\_\_.

- A. essential
- B. organized
- C. counted

- D. studied
- E. repetition

**ANSWER: A**

**Explanation:**

The correct answer is **essential**. In its usual adjective sense, *redundant* describes something that is unnecessary because it is extra, duplicated, or no longer needed. For example, a sentence may be redundant if it repeats information already stated, and a workplace position may be called redundant if the role is no longer required. By contrast, something *essential* is indispensable: it is necessary for a purpose, system, or outcome. This creates the intended opposite relationship for an antonym question. A redundant item can be removed without eliminating a needed function, whereas an essential item is required and cannot be omitted without affecting the result. Dictionaries recognize this relationship through the core meanings of the two words: Merriam-Webster defines *redundant* in terms of exceeding what is necessary or normal, while it defines *essential* as being of the utmost importance or necessary. Thus, “essential” most directly expresses the opposite of “redundant” in standard vocabulary usage. See the [Merriam-Webster definition of redundant](#) and the [Merriam-Webster definition of essential](#).

**QUESTION NO: 78**

Select the word that best completes the comparison.

“Femur” is to “leg” as “humerus” is to “\_\_\_\_\_”.

- A. hilarious
- B. orthopedist
- C. skull
- D. arm
- E. ulna

**ANSWER: D**

**Explanation:**

The correct completion is “**arm**”. This analogy matches a named bone to the major body region in which that bone is located. The femur is the long thigh bone and is part of the lower limb, commonly called the leg in this type of comparison. Correspondingly, the humerus is the single long bone that extends from the shoulder to the elbow, so it is located in the arm. Thus, the relationship is bone-to-body-region: femur to leg, and humerus to arm.

In anatomical terminology, the humerus connects proximally with the scapula at the shoulder joint and distally with the radius and ulna at the elbow. Its position and function make it the principal bone of the upper arm. This direct structural parallel is exactly what the comparison tests. For authoritative anatomical descriptions, see [Encyclopaedia Britannica’s entry on the humerus](#) and [its entry on the femur](#).

**QUESTION NO: 79**

Which sentence states the idea most clearly?

- A. Through a weekend bake sale, money was raised for the school garden by students.
- B. The school garden, through a weekend bake sale, was what students raised money for.
- C. Students raised money for the school garden through a weekend bake sale.
- D. Students had a weekend bake sale, and the school garden had money raised by them.

**ANSWER: C**

**Explanation:**

The third sentence is the clearest because it directly identifies the subject, the school garden, and the purpose of the funds. The modifying phrase “through a weekend bake sale” is placed close to the action it explains. The other choices use less direct wording or create an unclear relationship between the fundraiser and the garden. Clear sentences present related ideas in a logical order and keep modifiers near the words they describe. See the [Purdue OWL resources on conciseness](#).

**QUESTION NO: 80**

Which of the following is the least of the four expressions?

A.  $-\frac{11}{20}$

B.  $-\frac{3}{5}$

C.  $-\frac{7}{12}$

D.  $-\frac{17}{30}$

A. Option A

B. Option B

C. Option C

D. Option D

**ANSWER: B**

**Explanation:**

The fraction represented by **Option B** is the least value. To compare negative fractions reliably, rewrite all of them using a common positive denominator. The denominators shown have a least common denominator of 60, since 60 is divisible by 5, 12, 20, and 30. Converting each fraction to an equivalent fraction with denominator 60 makes the comparison direct: because every fraction now has the same denominator, the fraction with the smallest numerator is the least overall. For negative numbers, “least” means farthest to the left on the number line. Equivalently, among negative values, the value with the greatest absolute value is smaller. The conversion for Option B produces the most negative numerator among the four equivalent fractions, so its value is below each of the other expressions. This is consistent with the standard rule that multiplying a fraction’s numerator and denominator by the same nonzero number creates an equivalent fraction, allowing fractions to be compared on a shared scale. See [Khan Academy’s overview of common denominators](#) and [Math Is Fun’s guide to comparing fractions](#).

**QUESTION NO: 81**

"The Multiple Sides of Computer Science" by Matthew Miner (2014)

It often takes some time for a new discipline to become recognized as an independent science. An excellent example of this is computer science. In many ways, this science still is a hodgepodge of several different sciences, each one having its own distinct character. For example, some computer scientists are almost indistinguishable from mathematicians. Many of the most difficult topics in pattern recognition and data communications require intensive mathematics in order to provide

software solutions. Years of training in the appropriate disciplines are necessary before the computer scientist can even begin to work as a programmer in such areas. In contrast to those computer scientists who work with complex mathematics, many computer scientists work on areas of hardware development that are similar to disciplines like electrical engineering and physics.

However, computer science has its own particular problems regarding the unity of its subject matter. There are many practical applications for computing work; therefore, many computer scientists focus on learning a large set of skills in programming languages, development environments, and even information technology. All of these disciplines have a certain practical coloration that is quite distinct from the theoretical concepts used in other parts of the field. Nevertheless, these practical topics add to the broad range of topics covered by most academic programs that claim to focus on “computer science.” It can only be hoped that these disciplines will increase in orderliness in the coming decades.

Which of the following would strengthen the author’s main contention?

- A. Even social sciences like behavioral psychology are often studied in order to help develop artificial intelligence algorithms.
- B. All computer science departments require calculus.
- C. Almost all computer scientists have some ability in a major programming language.
- D. None of these
- E. No computer science curricula include studies from biology and chemistry.

**ANSWER: A**

**Explanation:**

The correct answer is “*Even social sciences like behavioral psychology are often studied in order to help develop artificial intelligence algorithms.*” The passage’s central contention is that computer science lacks a fully unified subject matter because it draws upon numerous fields with distinctly different methods, goals, and forms of preparation. The author already identifies mathematical work, hardware-related work connected to engineering and physics, and practical work involving programming and information technology. Evidence that behavioral psychology also contributes to computer-science work—specifically, the development of artificial-intelligence algorithms—adds another substantially different academic area to that list. This makes the field appear even more interdisciplinary and varied, reinforcing the claim that computer science is a broad mixture of disciplines rather than a neatly ordered, single-focus science. Behavioral science is particularly relevant to artificial intelligence because intelligent systems often address learning, decision-making, perception, and human behavior. The Association for Computing Machinery recognizes computing curricula as spanning a broad and evolving range of knowledge areas; see its [curricula recommendations](#). The interdisciplinary relationship between computing and the study of intelligence is also reflected in the Association for the Advancement of Artificial Intelligence’s [description of AI research](#).

## QUESTION NO: 82

Adapted from *On the Origin of Species* by Charles Darwin (1859)

How will the struggle for existence, discussed too briefly in the last chapter, act in regard to variation? Can the principle of selection, which we have seen is so potent in the hands of man, apply in nature? I think we shall see that it can act most effectually. Let it be borne in mind in what an endless number of strange peculiarities our domestic productions, and, in a lesser degree, those under nature, vary; and how strong the hereditary tendency is. Under domestication, it may be truly said that the whole organization becomes in some degree plastic. Let it be borne in mind how infinitely complex and close-fitting are the mutual relations of all organic beings to each other and to their physical conditions of life. Can it, then, be thought improbable, seeing that variations useful to man have undoubtedly occurred, that other variations useful in some way to each being in the great and complex battle of life, should sometimes occur in the course of thousands of generations? If such do occur, can we doubt (remembering that many more individuals are born than can possibly survive) that individuals having any advantage, however slight, over others, would have the best chance of surviving and of procreating their kind? On the other hand, we may feel sure that any variation in the least degree injurious would be rigidly destroyed. This preservation of favorable variations and the rejection of injurious variations, I call Natural Selection. Variations neither useful nor injurious would not be affected by natural selection, and would be left a fluctuating element, as perhaps we see in the species called polymorphic.

We shall best understand the probable course of natural selection by taking the case of a country undergoing some physical change, for instance, of climate. The proportional numbers of its inhabitants would almost immediately undergo a change, and some species might become extinct. We may conclude, from what we have seen of the intimate and complex manner in

which the inhabitants of each country are bound together, that any change in the numerical proportions of some of the inhabitants, independently of the change of climate itself, would most seriously affect many of the others. If the country were open on its borders, new forms would certainly immigrate, and this also would seriously disturb the relations of some of the former inhabitants. Let it be remembered how powerful the influence of a single introduced tree or mammal has been shown to be. But in the case of an island, or of a country partly surrounded by barriers, into which new and better adapted forms could not freely enter, we should then have places in the economy of nature which would assuredly be better filled up, if some of the original inhabitants were in some manner modified; for, had the area been open to immigration, these same places would have been seized on by intruders. In such case, every slight modification, which in the course of ages chanced to arise, and which in any way favoured the individuals of any of the species, by better adapting them to their altered conditions, would tend to be preserved; and natural selection would thus have free scope for the work of improvement.

What does Darwin mean by the phrase "economy of nature?"

- A. that islands and some climates are a complex economy
- B. a combination of these answers
- C. none of these answers
- D. the banking world
- E. the world of nature, creatures, and evolution

**ANSWER: E**

**Explanation:**

The world of nature, creatures, and evolution is correct because Darwin uses "economy of nature" to mean the interconnected arrangement of living things within their environment. Here, "economy" does not concern money or banking. It refers to the organization of natural life: the available places, resources, relationships, and conditions that allow organisms to survive and reproduce. Darwin describes how a climatic change can alter population sizes, cause extinctions, and affect many other inhabitants because species are "bound together" through complex relationships. In an isolated setting, such as an island, organisms from elsewhere may not be able to enter and occupy newly available places. As a result, variations within the existing species that better fit the changed conditions can be preserved through natural selection. Thus, the phrase encompasses organisms, their ecological roles, their relationships with one another, and the evolutionary changes that occur as they adapt to environmental conditions. This meaning is consistent with Darwin's discussion of the struggle for existence and natural selection in [On the Origin of Species](#). It also aligns with the modern ecological idea that organisms occupy interacting roles within ecosystems, as described by the [Encyclopaedia Britannica overview of ecosystems](#).

**QUESTION NO: 83**

Adapted from "The Study of Poetry" in *Essays in Criticism: Second Series* by Matthew Arnold (1888)

"The future of poetry is immense because in poetry, where it is worthy of its high destinies, humanity, as time goes on, will find an ever surer and surer stay. There is not a creed which is not shaken, not an accredited dogma which is not shown to be questionable, not a received tradition which does not threaten to dissolve. Our religion has materialized itself in the fact, in the supposed fact; it has attached its emotion to the fact, and now the fact is failing it. But for poetry the idea is everything; the rest is a world of illusion, of divine illusion. Poetry attaches its emotion to the idea; the idea is the fact. The strongest part of our religion today is its unconscious poetry."

Let me be permitted to quote these words of my own as uttering the thought which should, in my opinion, go with us and govern us in all our study of poetry. We should conceive of poetry worthily, and more highly than it has been the custom to conceive of it. We should conceive of it as capable of higher uses, and called to higher destinies, than those which in general men have assigned to it hitherto. More and more mankind will discover that we have to turn to poetry to interpret life for us, to console us, to sustain us. Without poetry, our science will appear incomplete, and most of what now passes with us for religion and philosophy will be replaced by poetry. Science, I say, will appear incomplete without it. For finely and truly does Wordsworth call poetry "the impassioned expression which is in the countenance of all science," and what is a countenance without its expression? Again, Wordsworth finely and truly calls poetry "the breath and finer spirit of all knowledge"; our religion, parading evidences such as those on which the popular mind relies now; our philosophy, pluming itself on its reasonings about causation and finite and infinite being; what are they but the shadows and dreams and false shows of knowledge?

The main purpose of the passage is to \_\_\_\_\_.

- A. emphasize the enduring nature of poetry and its inherent value
- B. examine the ability of poetry to transcend daily life
- C. demonstrate the breadth of knowledge that is embedded in poetry
- D. demonstrate the inferior nature of poetry compared to religion and science
- E. explain the beautiful aesthetic of poetry and its divinity

**ANSWER: A**

**Explanation:**

*emphasize the enduring nature of poetry and its inherent value* is correct because Arnold's central claim is that poetry has an unusually important and lasting role in human life. He begins by predicting an "immense" future for poetry and argues that it will become an increasingly dependable source of support as established creeds, dogmas, and traditions lose their authority. The passage then develops that claim by identifying the vital work poetry can perform: it can interpret life, console people, and sustain them. Arnold presents poetry not as a minor ornament to learning but as an essential means of understanding experience. His comparison with science, religion, and philosophy reinforces the same main idea. Science needs poetry's "expression" and "finer spirit," while systems of religious or philosophical certainty may prove unstable. Thus, the passage's purpose is to elevate poetry's significance and forecast its continuing power rather than merely describe a feature or style of poetry. The excerpt appears in Arnold's essay "The Study of Poetry," available through [Project Gutenberg](#). Background on Arnold and his critical writing is available from [Encyclopaedia Britannica](#).

**QUESTION NO: 84**

Two angles are supplementary and have a ratio of 1:4. What is the size of the smaller angle?

- A.  $36^\circ$
- B.  $72^\circ$
- C.  $144^\circ$
- D.  $18^\circ$
- E.  $45^\circ$

**ANSWER: A**

**Explanation:**

The correct answer is  $36^\circ$ . Supplementary angles are two angles whose measures add to  $180^\circ$ . A ratio of 1:4 means the two angles consist of a total of five equal parts: one part for the smaller angle and four parts for the larger angle. Let one part equal  $x$  degrees. The angle measures can then be represented as  $x$  and  $4x$ . Because their sum must be  $180^\circ$ , solve  $x + 4x = 180$ . Combining like terms gives  $5x = 180$ , and dividing by five gives  $x = 36$ . Since the smaller angle is the one represented by one ratio part, its measure is  $36^\circ$ . This also checks correctly: the larger angle is  $144^\circ$ , and  $36^\circ + 144^\circ = 180^\circ$ . For a review of supplementary angles and their defining sum, see [Khan Academy's angle-relationships resource](#). For ratio-based problem-solving concepts, see [Math Is Fun: Ratios](#).

**QUESTION NO: 85**

An antonym for "fuming" is \_\_\_\_\_.

- A. argumentative
- B. smoldering
- C. inquisitive

D. discursive

E. serene

**ANSWER: E**

**Explanation:**

“serene” is the correct antonym because, in this context, “fuming” describes a person who is intensely angry or visibly upset. The word commonly appears in phrases such as “fuming with anger,” where it conveys emotional agitation, indignation, and a lack of calm. “Serene,” by contrast, means calm, peaceful, and untroubled. A serene person remains composed rather than becoming angry or worked up, so the two words express opposing emotional states. This contrast is especially clear when the question uses “fuming” figuratively rather than referring to literal smoke or vapor. Standard dictionary definitions support this relationship: Merriam-Webster defines “fuming” in its adjective sense as feeling or showing anger, while it defines “serene” as clear and free of storms or calm and peaceful. Therefore, “serene” best supplies the required opposite in meaning. See the definitions at [Merriam-Webster: fuming](#) and [Merriam-Webster: serene](#).

**QUESTION NO: 86**

An antonym for “flagrant” is \_\_\_\_\_.

A. calm

B. pacifist

C. overwrought

D. violent

E. concealed

**ANSWER: E**

**Explanation:**

“Concealed” is the best antonym for “flagrant.” In this context, *flagrant* describes something that is conspicuous, obvious, or openly offensive—especially a violation of a rule, law, or accepted standard. A flagrant act is not subtle; it stands out clearly and may be committed with a disregard for how plainly improper it appears. By contrast, something concealed is hidden from view or kept from being known. It is therefore the clearest opposite in terms of openness and visibility: a flagrant violation is obvious and public, while a concealed act is secret or obscured. This contrast fits the common use of the word in phrases such as “a flagrant violation,” where the wrongdoing is especially noticeable rather than hidden. Merriam-Webster defines *flagrant* as conspicuously offensive, while its entry for *conceal* emphasizes preventing something from being seen or known. See [Merriam-Webster: flagrant](#) and [Merriam-Webster: conceal](#).

**QUESTION NO: 87**

“Dome” is to “building” as “capital” is to “\_\_\_\_\_”.

A. money

B. column

C. city

D. legislature

E. suburb

**ANSWER: B**

**Explanation:**

The correct completion is “column.” The analogy uses an architectural part-to-whole relationship, specifically an element positioned at the top of a larger structure. A dome is a rounded roof or rooflike architectural feature that sits atop a building. In classical architecture, a capital is the uppermost member of a column: it forms the column’s crowning section and provides a transition between the vertical shaft and the structure it supports above. Thus, the intended relationship is that a dome is at the top of a building in the same way that a capital is at the top of a column.

This question relies on recognizing the architectural meaning of “capital,” rather than its common meanings involving a principal city, money, or government. Capitals have distinct designs associated with classical orders, such as Doric, Ionic, and Corinthian columns, making them familiar decorative and structural features in traditional buildings. The definition of a column capital as its uppermost part is supported by [Encyclopaedia Britannica’s entry on capitals](#). For additional architectural context on columns and their component parts, see the [U.S. National Park Service overview of classical architecture](#).

**QUESTION NO: 88**

A full helium tank can blow up 50 balloons. At least how many times does the tank have to be re-filled in order to blow up 140 balloons?

- A. 3
- B. 4
- C. 2
- D. 5

**ANSWER: C****Explanation:**

The correct answer is 2. The key word is “re-filled,” which counts only the times the tank must be filled again after starting with a full tank. The initial full tank blows up 50 balloons. After those 50 balloons, one refill provides enough helium for another 50, bringing the total to 100 balloons. A second refill provides helium for up to 50 more balloons, which brings the available total to 150 balloons. Since 150 is at least 140, two refills are sufficient.

This can also be represented by first finding the total number of full tankfuls needed:  $140 \div 50 = 2.8$ , so 3 full tankfuls of helium are required because a partial tankful does not meet the stated capacity model. One of those three tankfuls is the tank’s original full state; only the remaining two tankfuls require refilling. This distinction between an initial quantity and subsequent replacements is essential in rate and capacity word problems. For related instruction on interpreting division in word problems, see [Khan Academy](#) and [Math Is Fun](#).

**QUESTION NO: 89**

Adapted from Once on a Time by

**A. Milne (1922)**

The Princess was still puzzled. "But I'm grown up," she said. "I don't want a mother so much now."

The King turned his flagon round and studied the other side of it.

"A mother's – er – tender hand," he said, "is – er – never – " and then the outrageous thing happened.

It was all because of a birthday present to the King of Barodia, and the present was nothing less than a pair of seven-league boots. The King being a busy man, it was a week or more before he had an opportunity of trying those boots. Meanwhile he used to talk about them at meals, and he would polish them up every night before he went to bed. When the great day came for the first trial of them to be made, he took a patronizing farewell of his wife and family, ignored the many eager noses pressed against the upper windows of the Palace, and sailed off. The motion, as perhaps you know, is a little disquieting at first, but one soon gets used to it. After that it is fascinating. He had gone some two thousand miles before he realized that there might be a difficulty about finding his way back. The difficulty proved at least as great as he had anticipated. For the rest of that day he toured backwards and forwards across the country; and it was by the merest accident that a very angry King shot in through an open pantry window in the early hours of the morning. He removed his boots and went softly to bed. It was, of course, a lesson to him. He decided that in the future he must proceed by a recognized route, sailing lightly from landmark to landmark. Such a route his Geographers prepared for him – an early morning constitutional, of three hundred

miles or so, to be taken ten times before breakfast. He gave himself a week in which to recover his nerve and then started out on the first of them.

The point of view from which the passage is told can best be described as that of \_\_\_\_\_.

None of these characters

B. The Princess's father

C. The Princess

D. The Queen

E. The King of Barodia

**ANSWER: A**

**Explanation:**

"None of these characters" is correct because the passage is narrated by an outside voice rather than by the Princess, her father, the Queen, or the King of Barodia. The narrator consistently identifies the people in the story as "the Princess," "the King," and "his wife," rather than speaking as one of them. This establishes an external, third-person point of view. The narration also supplies information that is not limited to one character's immediate speech or perspective. For example, it describes the King's routines, summarizes his travel, and comments directly to the reader with "as perhaps you know." That conversational aside is the voice of a detached storyteller, not a statement made by a character within the events. The passage's fairy-tale setting and broad account of events further support the use of an outside narrator who can move freely across time, action, and characters. Point of view concerns the position from which readers receive the story; when the narrator is not a participant and refers to characters from outside the action, the narration is third person. Purdue Online Writing Lab discusses point of view and narrator choices in fiction at [Purdue OWL](#). For a general overview of narrative voice and point of view, see [Encyclopaedia Britannica](#).

**QUESTION NO: 90**

In a given college:

Everyone who likes "The Walking Dead" likes "Boardwalk Empire".

Everyone who dislikes "The Sopranos" likes "Deadwood".

Nobody likes both "Boardwalk Empire" and "The Sopranos".

Philip, a student at this college, likes "The Walking Dead".

Which of the following does he also like – "The Sopranos" or "Deadwood"?

A. "The Sopranos", but not "Deadwood"

B. Neither "The Sopranos" nor "Deadwood"

C. "Deadwood", but not "The Sopranos"

D. Both "The Sopranos" and "Deadwood"

**ANSWER: C**

**Explanation:**

"Deadwood", but not "The Sopranos" is correct because the statements form a direct chain of implications about Philip. Since Philip likes "The Walking Dead," the first condition establishes that he likes "Boardwalk Empire." The condition that nobody likes both "Boardwalk Empire" and "The Sopranos" means that a person who likes "Boardwalk Empire" cannot also like "The Sopranos." Therefore, Philip does not like "The Sopranos." The next condition applies specifically to every person who dislikes "The Sopranos": each such person likes "Deadwood." Because Philip has been shown to dislike "The Sopranos," it follows that he likes "Deadwood." Thus, the available facts determine both parts of the conclusion: Philip likes "Deadwood" and does not like "The Sopranos." This is an example of chaining conditional statements, often called a hypothetical syllogism, while treating "nobody likes both" as an incompatibility condition. For an overview of conditional

reasoning and valid argument forms, see [OpenStax Introduction to Philosophy](#). For further discussion of logical implication, see [Encyclopaedia Britannica on logical implication](#).

#### QUESTION NO: 91

Which word does not belong with the others?

- A. interpret
- B. disregard
- C. understand
- D. construe
- E. decipher

**ANSWER: B**

#### Explanation:

The correct answer is **disregard**. “Disregard” means to pay no attention to something, to ignore it, or to treat it as unimportant. Its central idea is deliberately withholding attention rather than making sense of information. This meaning makes it the semantic outlier in a vocabulary grouping centered on comprehension and interpretation. In ordinary usage, someone might disregard a warning, a rule, or another person’s comments; in each case, the person is not engaging with the material in order to determine its meaning. The word therefore represents an action of setting information aside instead of processing it. Dictionary definitions consistently identify “disregard” with ignoring or failing to consider something. Merriam-Webster defines the verb as paying no attention to or treating as unworthy of regard, while Cambridge Dictionary similarly emphasizes not giving attention or thought to something. These definitions support selecting **disregard** as the word that does not fit the intended relationship among the terms. See [Merriam-Webster: disregard](#) and [Cambridge Dictionary: disregard](#).

#### QUESTION NO: 92

Two interior angles of a triangle adds up to 64 degrees. What is the measure of the other angle?

- A. 26
- B. 32
- C. 116
- D. 148
- E. 84

**ANSWER: C**

#### Explanation:

The correct answer is **116**. In every Euclidean triangle, the measures of the three interior angles have a total of 180 degrees. The question states that two of the triangle’s interior angles add to 64 degrees, so the remaining angle is found by subtracting that combined measure from the full 180-degree total:  $180 - 64 = 116$ . Therefore, the measure of the third interior angle is 116 degrees. This result is also geometrically possible: because 64 degrees is positive and less than 180 degrees, the remaining 116 degrees is positive, and the three angles together total exactly 180 degrees. The triangle angle-sum rule is a fundamental property of triangles in plane geometry and is routinely used to determine an unknown interior angle when the other angle measures, or their sum, are known. For a review of this theorem, see [Khan Academy’s Triangle Angle Sum Theorem](#) and [Wolfram MathWorld’s Triangle Angle Sum Theorem](#).

## QUESTION NO: 93

Select the answer choice that is closest in meaning to the word in capital letters.

PRETENTIOUS

- A. Fictitious
- B. Ostentatious
- C. Unreal
- D. Illusory
- E. Ephemeral

**ANSWER: B**

### Explanation:

**Ostentatious** is the closest meaning to **pretentious**. Both terms describe an exaggerated display intended to impress other people, especially when the display suggests greater importance, wealth, taste, learning, or social status than is warranted. A pretentious person may adopt grand manners, use showy language, or make conspicuous claims in order to appear more impressive. Similarly, something ostentatious is characterized by a conspicuous, often excessive, display designed to attract notice and admiration.

Major dictionaries explicitly connect these ideas. Merriam-Webster defines *pretentious* as making “usually unjustified or excessive claims,” while its definition of *ostentatious* emphasizes attracting or seeking to attract attention through showiness. In vocabulary questions asking for the closest synonym, the best choice should preserve this central sense of self-important, showy display rather than merely suggesting that something is imaginary or short-lived. See the definitions at [Merriam-Webster: pretentious](#) and [Merriam-Webster: ostentatious](#).