

“sadness,” so eliminate (D) and (E). The correct answer is (B).

2. **D acute**

The blank is describing *black bears...claws*. The transition word *[w]hile* indicates that the *claws of black bears* are different from those of *grizzly bears*, which are described as *long, flat, and somewhat blunt*. Black bears’ claws are described in the sentence as *short and curved*, which are the opposite of *long* and *flat*. Therefore, a good word for the blank is the opposite of *somewhat blunt*, so use “sharp” and evaluate the answer choices. Choice (A) *obtuse* is a synonym for *blunt*, so eliminate (A). Choice (B), *abominable* may describe a bear, but the word doesn’t mean “sharp” and so doesn’t match the clue, so eliminate (B). Choice (C), *barren*, is not a match for “sharp” so eliminate it. Choice (D), *acute*, is a good match for “sharp,” so keep (D). Choice (E), *fearful* does not match “sharp,” so eliminate it. The correct answer is (D).

3. **C static**

The blank is describing *individual personalities*. The semicolon indicates that the clause before the semicolon should agree with the clause following it. Therefore, the duality of *stability versus change* must be matched in the second clause by the duality describing *personalities*—the word in the blank or *different*. The adjective *different* in the second clause corresponds to *change* in the first, so the word in the blank must be an adjective corresponding to *stability*. Recycle from the clue and use “stable.” Choice (A) *transient*, means last for a short period of time, so eliminate (A). Choice (B), *maladjusted*, is not a match for “stable” so eliminate it. Choice (C), *static*, is a good match for the “stable” so keep (C). Choice (D), *disturbed*, and

(E), *discreet*, are both poor matches for “stable,” so eliminate (D) and (E). The correct answer is (C).

4. **E prodigious**

The blank is describing the kind of *economic ripples* caused by *[t]he Erie Canal’s completion*. The clause after the semicolon provides further insight into the sentence: *property values and industrial output...rose exponentially*. Therefore, these ripples could thus be described as significant or “large,” so use this word for the blank. Choice (A), *persistent*, is not a match for “large” so eliminate it. Choice (B), *invaluable*, doesn’t quite mean “large,” and (C), *incredulous*, is nothing like “large” so eliminate (B) and (C). *[S]evere* might describe a significant economic effect, but that effect would be negative, not positive as implied here, so eliminate (D). Choice (E), *prodigious*, meaning impressively great or large, is a good match for “large.” The correct answer is (E).

5. **B stolidity**

The blank is describing how *voters...respond to the levy of a new tax*. The clue in the sentence is the word *inured*, which means hardened to a negative situation. If *[v]oters* are *inured*, then their response to *the levy of a new tax* would not be strong. Thus, the word in the blank could be “resignation.” Choice (A), *amazement*, is not a match for “resignation” so eliminate (A). Choice (B), *stolidity*, or lack of emotion, is a good match so keep (B). Choice (C), *exasperation*, may describe how voters feel generally toward politicians, but is not supported by the passage so eliminate (C). Choice (D), *alarm*, and (E), *perplexity*, are both poor matches for “resignation,” so eliminate both answer choices. The correct answer is (B).

6. **B commensurate**

The blank is describing *when...it is desirable to expand the yield of a harvest*. The sentence provides further insight into this by stating that *it is desirable to expand...yield*, but only if there aren't also certain *additions in time, exertion and other variable factors of production*. So, a word such as “similar” for the blank conveys the logic that expanded yield shouldn't require expanded additions in time and other factors. Choice (A), *predestined*, is not a match for “similar,” so eliminate (A). Choice (B), *commensurate*, is a good match for the blank, so keep (B). Choice (D), *deliberate*, is not a match for the blank, so eliminate it. Choice (C), *analogous*, is close, but *commensurate* is more quantitative, so eliminate (C). While *indeterminate* or uncertain additions are certainly not desired, this choice doesn't match “similar,” so eliminate (E). The correct answer is (B).

Text Completions Practice Set

1. **B futile**

Begin by determining who/what the blank in the sentence is describing. The blank is describing *the conviction of the United States to remain neutral*. Now determine what else gives insight into the word for the blank. The sentence states that global interconnectedness is on the rise in the introductory phrase, which stands in contrast to *the conviction of the United States to remain neutral*.

Therefore, in a climate of global interconnectedness, for a nation like the United States to remain neutral would be difficult to maintain, so use a word like “improbable” for the blank. Something *presumptuous* is not necessarily “improbable.” *Futile* is a good match for “improbable” so keep (B). *Contemptuous* doesn't match “improbable,” and

both *pragmatic* and *admirable* are the opposite of “improbable.”

2. **B enamored of**

Begin by determining who/what the blank in the sentence is describing. The blank describes Flaubert’s reaction to *belly dancing*. Now determine what else gives insight into the word for the blank. The sentence states that *the dancers alone made his trip worthwhile*. Therefore, he was undoubtedly “impressed by” the dancing, so use that phrase for the blank. [O]verwhelmed by is an extreme phrase implying that Flaubert was unsure what to make of the dancing, so eliminate (A). [E]namored of is a decent match for “impressed by,” so keep (B). [T]aken aback by is a negative phrase, suggesting that Flaubert was surprised to the point of shock. This does not match “impressed by” so eliminate (C). The phrases *beseeched by* and *flustered by* are not good matches for “impressed by,” so eliminate (D) and (E).

3. **A fragile and E vulnerability**

This is a two-blank Text Completion question, so determine which blank is easier. Try starting with the first blank. Determine who/what the blank in the sentence is describing. The blank is describing the kind of *species* that *the human race is*. Now determine what else gives insight into the word for the blank. The sentence states that *the façade of calm...is flimsy and effortlessly ruptured*. The same-direction transition word *as* indicates that the blank agrees with the clue, so the human species must be “easily broken” or “weak.” *Fragile* is a good match for “broken,” so keep (A). *Purposeful* and *daring* are not good matches for “broken,” so eliminate (B) and (C). Begin work with the second blank by determining who/what the blank is

describing. The blank is describing something that is *flimsy and easily ruptured*. The word *anxiety* gives further insight into the word for the blank as the transition word *and* indicates that the blank will match *anxiety*. Choice (D), *terror*, is extreme, so eliminate (D). Choice (E), *vulnerability*, is a good match for anxiety, so keep (E). Choice (F), *humor*, is the opposite of the expected word.

4. **B prerogative and F attainable by**

This is a two-blank Text Completion question, so determine which blank is easier. Work with the second blank first. Determine who/what the blank in the sentence is describing. The blank is describing something about *books* relationship to *the average man*. Now determine what else gives insight into the word for the blank. The statements that *the increased popularity of dime novels*, *the expansion of the number of bookstores*, and *the introduction of the paperback* in addition to time transition *until the late 1800s* indicate that books were more “affordable to” or “available to” the average man. *Dislikeable to* and *excitable to* do not make “affordable to” so eliminate (D) and (E). Choice (F), *attainable by*, is a good match for the blank, so keep (F). Now work with the first blank. The transition word *until* indicates that, before *the late 1800s*, the situation was different from the later attainability of books by the average man. The word in the first blank must therefore be a noun describing “something limited to” *the well-to-do*. *Conduit* is not a good match for “something limited to,” so eliminate (A). Choice (B), *prerogative*, which means a right or privilege, is a good match, so keep this choice. Choice (C), *plight*, is also a poor match, so eliminate (C).

5. **A an ineluctable and F merely denouement**

This is a two-blank Text Completion question, so determine which blank is easier. Try starting with the first blank. Determine who/what the blank in the sentence is describing. The first blank describes the kind of *victory*... *those already in office can coast to*. Now determine what else gives insight into the word for the blank. The sentence states that *boundaries...are drawn in order to protect incumbents*, so a good word for the blank is something like “easy to get.” Choice (A), *an ineluctable*, is a good match for the blank, while *an invidious*, which means inspiring ill will, and *a plangent*, which means reverberating, do not match the word for the blank. Keep (A) and eliminate (B) and (C). Now work with the second blank. Determine who/what the blank in the sentence is describing. The second blank describes *the general election*. Now determine what else gives insight into the blank. Though introduced by the same-direction transition *[o]f course*, the sentence actually sets up the possibility of a challenge to the incumbent, but the transition word *[n]evertheless* reverses this idea. Therefore, the word in the second blank describing *the general election* could be an adjective similar to “ineluctable.” Try to rephrase the difficult answer choices. Both (D), *seldom nugatory*, meaning rarely trivial, and (E), *remarkably contentious*, go against the expected sense. *[M]erely denouement* suggests a simple outcome or mere formality, so this choice is a good match. Keep (F).

6. **A pedantic and D antediluvian**

This is a two-blank Text Completion question, so determine which blank is easier. Try starting with the first blank. Determine who/what the blank in the sentence is describing. The first blank describes certain *professors*. Now determine what else gives insight into the word for the blank. The passage states that the professors *insist*

that video games will never be a proper object of study. The transition word *[w]hile* also indicates that these professors are different from *more heterodox academics*. The opposite of *heterodox academics* would be “orthodox,” so that’s a good word for the blank describing the professors. Choice (A), *pedantic*, meaning scholarly in a narrow-minded way, is a good match for the blank so keep (A). *Progressive* and *erudite* may describe professors generally, but do not match the word for the blank, so eliminate (B) and (C). Now work with the second blank. Determine who/what the blank in the sentence is describing. The second blank describes how *the rising generation* views the opinions of their pedantic colleagues. Now determine what else gives insight into the word for the blank. The sentence describes the *rising generation* as *more heterodox*, so they likely see these views as “overly conservative.” Choice (D), *antediluvian*, which means old-fashioned, is a good match so keep (D). Choice (E), *pusillanimous*, and (F), *jejune*, are both poor matches for the blank, so eliminate (E) and (F).

7. **C fulfilled, F changes, and H perilously**

This is a three-blank Text Completion question, so determine which blank is easiest. The first sentence is self-contained so start with the first blank. Determine who/what the blank in the sentence is describing. The first blank describes the *presumption that the future will be similar to the past*. Now determine what else gives insight into the word for the blank. The sentence states that *predictions...prove...accurate*. The *presumption that the future will be similar to the past* leads to accurate predictions IF this presumption is “true,” so use that word for the first blank. *[D]isproved* gives the opposite meaning, so eliminate (A). *[S]tipulated* implies that the truth of this presumption is somehow imposed, so

eliminate (B). *[F]ulfilled* suggests that the presumption comes to pass. This is a good match, so keep (C). Now, work with the third blank and determine who/what the blank is describing. The third blank is describing how *wrong* the *predictions* can be. Determine what else gives insight into the word for the blank. The transition word *however* indicates that the meaning of the sentence switches direction, which means there is lack of predictability, so the third blank should emphasize the adjective *wrong*. *Thoughtfully* makes an assumption about those who are making the predictions, and does not address the predictions themselves, so eliminate (G). Choice (H), *perilously*, is a good fit for the blank as it describes *wrong*. Keep (H). *Carelessly* also makes an assumption about those who are making the predictions, and does not address the predictions themselves, so eliminate (I). Work with the second blank and determine who/what the blank is describing. The blank is describing the *periods*. Determine what else gives insight into the word for the blank. Wrong predictions will happen in different circumstances from those in the first sentence—that is, when the future and the past are not similar. So a word like “changes” is a good match for second blank. *Upswings* and *insurgencies* does not match “changes,” so eliminate (D) and (E). *Changes* is the word in (F), so keep (F).

8. **B dense, F liquid, and G an illustration**

This is a three-blank Text Completion question, so determine which blank is easiest. Begin with the second blank and determine who/what the blank is describing. The blank is the second half of a comparison about *water*. Determine what else gives insight into the word for the blank. The first half of the comparison is water as a *solid*, so a good word for the blank will be something like

“liquid.” Choices (D) and (E) do not match “liquid,” but (F) is an exact match, so keep (F). Now work with the first blank and determine who/what the blank is describing. The blank is describing what *water...as a solid*. Determine what else gives insight into the word for the blank. The sentence states that the blank will be a word for what water is *less of as a solid than as a liquid*. The sentence also states to *look at the floating ice in your water glass*, so water will float as a solid inside its liquid form. If something is lighter than the liquid it sits in, that thing will float, and because of the transition word *less*, the sentence is discussing the opposite of lighter, so use a word like “heavy” for the blank. Choice (A) is not a good match, so eliminate it. Choice (B), *dense*, is a match for “heavy,” so keep (B). Choice (C) is not a match for “heavy,” so despite that *aqueous* could be used to describe water, eliminate (C). Work with the third blank and determine who/what the blank is describing. The third blank describes something the reader might *need*. Determine what else gives insight into the word for the blank. The sentence states that what the reader might *need* is to *look at the floating ice in your water glass*. The semicolon is a transition that indicates the same direction, so the third blank is an “example” of the statements in the first part of the sentence. Choice (G), *an illustration*, is a good match for “example” so keep (G). Choices (H) and (I) are not matches for “example,” so eliminate them both.

9. **C practicing, E articulate, and I unfamiliar**

This is a three-blank Text Completion question, so determine which blank is easiest. Begin with the first blank and determine who/what the blank is describing. The first blank describes something *Molly* was doing with *Spanish*. Determine what else gives insight into the word for the blank. The sentence states that she was going to

take a *trip to Chile* and that she *could comprehend her friends*, so a good word for the blank is “studying.” Choice (A), *mastering*, is too extreme and (B), *disregarding*, is the opposite of “studying,” so eliminate (A) and (B). Choice (C), *practicing*, is a good match for the blank, so keep this choice. Now, work with the third blank and determine who/what the blank is describing. The blank describes *the...language*. The sentence gives further insight into the blank by stating that she was *practicing Spanish* and that *she could comprehend her friends*. Therefore, a good word for the blank is something like “new to her.” Choices (G) and (H) do not match “new to her,” so eliminate them both. Choice (I), *unfamiliar*, is a good match for “new to her,” so keep (I). Determine who/what the second blank is describing. The blank is describing what Molly *could not* do with *her thoughts*. The opposite-direction transition word *although* indicates that her listening skills are good as *she could comprehend her friends*, but her speaking skills must be less solid because *she could not* “express” *her thoughts*. Choice (D), *acknowledge*, is not a good match for *express*, so eliminate (D). Choice (E), *articulate*, is a good match for “express,” so keep (E). Choice (F) is also not a good match for the blank, so eliminate it.

10. **B demarcates, D apocryphal, and I senescence**

This is a three-blank Text Completion question, so determine which blank is easiest. Begin with the third blank and determine who/what the blank is describing. The third blank is describing a *phenomenon* in *turtles*. Determine what else gives insight into the word for the blank. The sentence states that turtles *showing no signs of aging* is a way to describe the phrase in quotes; thus, the phenomenon could be described as *negligible* “aging.” Choice (G), *rejuvenation*, is the opposite of “aging” and

(H), *superannuation*, means the state of being old. Choice (I), *senescence*, means the process of aging, so while (H) is a decent fit for the word in the blank, (I) is a better one, so eliminate (H) and keep (I). Work with the second blank and determine who/what the blank is describing. The blank is a descriptive word about the *stories of musket balls being found in the shells of living turtles*. Determine what else gives insight into the word for the blank. Using *while* as a transition, the second blank contrasts the *tales of musket balls..found in the shells of living turtles* with the known phenomenon of “negligible senescence.” If “negligible senescence” is something legitimate and recognized, then the tales of musket balls in turtle shells *may be* “dubious” or “bogus.” Choice (D), *apocryphal*, is a good fit for “dubious,” while (E) is the opposite of “dubious,” and (F) is extreme and implies a judgment. Keep (D). Determine who/what the first blank is describing. The blank is describing *the human lifespan*. Determine what else gives insight into the word for the blank. For the first blank, it can be inferred that the [p]eople who dismiss tales of musket balls in turtle shells think that the human lifespan “represents” *the outer bounds of animal longevity*. Choice (A), *believes*, is the opposite of “represents” so eliminate it. Choice (B), *demarcates*, is a good match for “represents,” so keep (B). Choice (C), *antedates*, is also a poor match for “represents,” so eliminate (C).

CHAPTER 5: SENTENCE EQUIVALENCE

Sentence Equivalence Drill

1. C modern and E contemporary

The blank is describing the *observer*. The sentence gives further insight into the blank with the word *ancient* and the transition word *or*, which indicates that a good word for the blank is the opposite of *ancient*. Therefore, a good word for the blank could be “modern.” Choice (A), *antiquated*, is the opposite of “modern” so eliminate (A). Choice (B), *perceptive*, is a poor match for “modern,” so eliminate it. Choice (C), *modern*, is a perfect match, so keep (C). Choice (D), *astute*, is not a match for “modern,” so eliminate it. Choice (E), *contemporary*, is a good match, so keep it. Choice (F), *archaic*, is the opposite of “modern,” so eliminate it. The correct answer is (C) and (E).

2. D innate and F inborn

The blank is describing *characteristics*. The passage gives further insight by stating that some *arise through experience* and that [r]esearchers are *interested in the nature versus nurture debate*. This duality is reflected later in the sentence when it’s explained why these researchers *use identical twins...separated at birth to explore* this debate. Characteristics which *arise through experience* correspond to *nurture*, so the characteristics described by the blank should correspond to *nature*, so use “natural” as the word for the blank. *Intractable* is a poor match for “natural,” so eliminate (A). Choice (B), *nascent*, means just coming into existence, which sounds like it could match “natural” but does not fit because something does not have to be “natural” to be called nascent.

Eliminate (B). Choice (C), *erudite*, means scholarly, so eliminate it. Choice (D) is a good match for the blank, so keep it. Choice (E), *predilection*, means a preference, so eliminate it. Choice (F) is a good match for the blank, so keep it. The correct answer is (D) and (F).

3. **A capricious** and **D unconventional**

The blank is describing the *behavior* and the sentence gives further insight into the clue by stating that the Canadian Prime Minister is *eccentric*. So, a good word for the blank is “eccentric.” Choice (A), *capricious*, is a good match for “eccentric,” so keep (A). Choice (B), *lackluster*, means not to standard, so eliminate it. Choice (C), *poised*, is the opposite of “eccentric,” so eliminate (C). Choice (D), *unconventional*, is a good match for the blank, so keep (D). Choice (E), *repulsive*, could describe behavior in some, but is not a match for “eccentric,” so eliminate (E). Choice (F), *decorous*, is also the opposite of “eccentric,” so eliminate (F). The correct answer is (A) and (D).

4. **B dynamic** and **F oscillating**

The blank is describing the *conditions of life*. The sentence gives further insight into the blank by listing examples of what the conditions of life could be, *such as...atmospheric pressure...physical activity, and diet*. These clues imply that the *conditions of life* are “varying.” Choice (A), *inveterate*, means have a long-standing habit, so eliminate it. Choice (B) is a good match for the blank, so keep it. Choice (C), *timorous*, means nervousness, so eliminate it. Choice (D), *cowed*, means to pressure by intimidation, so eliminate it. Choice (E), *turgid*, means swollen, so eliminate (E). Choice (F) is a good match for the blank, so keep it. The correct answer is (B) and (F).

5. B commandeer and F appropriate

The blank is describing what the *armed forces* did to *any working form of transportation they could find*. The sentence gives further insight into the blank by stating the *armed forces were without an adequate number of vehicles of their own*, after *arriving...days after Hurricane Zelda*. So, the armed forces were “taking over” any form of transportation. Choice (A), *repatriate*, means to send someone back to their home country, so eliminate (A). Choice (B), *commandeer*, is a good match, so keep it. Choice (C), *extradite*, means to hand over someone to a judicial system, so eliminate (C). Choice (D), *interdict*, means to prohibit, so eliminate (D). Choice (E), *expurgate*, means to remove something questionable, so eliminate (E). Choice (F), *appropriate*, is a good match for the blank, so keep (F). The correct answer is (B) and (F).

Sentence Equivalence Practice Set

1. B affinity and F predilection

The word in the blank describes Jim’s feelings for *gumdrops*. The clue is that he *enjoyed all kinds of candy*. There is an opposite-direction transition word, *but*, which in this case doesn’t mean that his feelings for gumdrops contradict the clue, just that they are distinctive in some way. This is emphasized by the extra information that gumdrops were *his absolute favorite*. Thus, the word in the blank should be something like “preference.” Both *affinity* and *predilection* mean “preference.” *[O]dium* and *disregard* mean the opposite, and *nature* and *container* don’t match at all.

2. A fiasco and B debacle

The blank is a noun describing the *Wright brothers' first attempted flight*. One clue is that *subsequent efforts similarly ended in failure*, where *similarly* is a same-direction transition word. Another clue is that *they... ultimately made the first successful...flight*, and the opposite-direction transition word *[a]lthough* indicates that the first flight was not successful. Thus, recycle the word “failure” for the blank. *[F]iasco* and *debacle* are the best matches as both are colorful words for “failure.” Both *triumph* and *feat* have the opposite meaning. *[H]indrance* isn’t strong enough to mean “failure,” and *precedent* isn’t a match at all.

3. **D diminishes and F wanes**

The clue *due to the increased aerodynamic drag suggests a negative impact on fuel efficiency...at speeds greater than 50 miles per hour*. Thus, the verb in the blank should be something like “decreases.” Both *diminishes* and *wanes* work. The verbs *equalizes* and *stabilizes* imply that fuel efficiency simply levels off. However, if the negative factor of aerodynamic drag increases, then there must be a negative—not a neutral—impact on fuel efficiency. The word *increases* means the opposite of “decreases,” and *adapts* isn’t a match at all.

4. **B an inept and F a maladroit**

The clue is *the vast amount of time Francis dedicated to learning six...languages*. The opposite-direction transition word *[d]espite* indicates that the word in the blank describing Francis as a communicator is at odds with his dedication to learning languages. This idea is continued after the transitional semicolon with an additional clue regarding *his inability to construct cogent prose*. Thus, the word in the blank modifying *communicator* should be

something like “poor” or “ineffective.” *[I]nept* and *maladroit* are the correct answers. *[A]stute* has the opposite meaning of what’s expected, and *morde* is out of place because it means gloomy. Though it’s possible Francis is *florid* and *prolific*, the clues don’t directly support these ideas.

5. E temperament and F humor

The transition word *yet* suggests that, despite being twins, the two sisters were very different. One is described as *sanguine*, which context implies is the ability to remain upbeat *even in times of stress*. The other is described as *choleric*, which context describes as *prone to angry outbursts*. The transition word *while* emphasizes the contrast between the sisters. What’s being described here are personality traits, so the noun in the blank modified by *choleric* should be something like “personality” or “disposition.” Eliminate *genotype*, referring to genetic makeup, and *environment*, referring to one’s surroundings. *[P]hysiognomy*, referring to facial features, and *incarnation*, meaning embodiment, don’t work either. The correct answer is *temperament* and *humor*.

CHAPTER 6: READING COMPREHENSION

Reading Comprehension Drill

For this drill, we will walk you through detailed explanations of every choice.

1. A

The phrase *would most likely be* indicates that this is an inference question. The subject of the question is the intended audience. The task of the question is to find who this audience can be inferred to be. In order to answer the question, determine what the passage says about the subject and evaluate the answer choices, eliminating any choice which cannot be supported by the text. Look at each answer choice and try to find information in the passage that supports the choice.

Choice (A): Correct. The passage contains information about the aye-aye's habitat (*Madagascar*), classification (*closely related to the lemur, a member of the primate order*), status (*listed as an engendered species*), and physical adaptations (*large, round eyes and long, extremely thin little middle*) that would be appropriate for visitors to a natural history museum.

Choice (B): No. While the passage does mention evolution by citing the aye-aye's *large, round eyes and long, extremely thin middle finger* as *adaptations* that are *quite sensible*, this choice's reference to evolution is a memory trap. The remainder of the passage would not be relevant to *professors of evolutionary science*, who would want to know details of the aye-aye's evolutionary history.

Choice (C): No. This choice is incorrect because the overview style of the passage is designed to describe the animal and its environment in a broad, fashion that includes scientific details, but does not focus on them. This choice is a memory trap.

Choice (D): No. The passage's only mention of religion is that the aye-aye is considered by the people of Madagascar as a *spirit animal* that is considered *an omen of death*. This does not necessarily indicate a religious belief, so this choice is a memory trap.

Choice (E): No. While there are references to the culture of Madagascar, specifically in the people of Madagascar and their views on the aye-aye, the passage is more focused on the aye aye itself than on the overall culture of Madagascar, so this choice is a memory trap.

The correct answer is (A).

2. **A**

The word *attitude* indicates that this is a tone question. The subject of the question is the author's attitude. The task of the question is to determine how this attitude can best be described. In order to answer the question, determine what the passage states about the subject and evaluate the answer choices, eliminating any choice which cannot be supported by the text. The highlighted text describes the aye-aye as a *superb example of life's variety*, which is a positive statement, so look at each answer choice and determine whether this information supports the choice.

Choice (A): Correct. The passage states that the aye-aye is a *superb example of life's variety*, a

positive statement that is matched by the positive word *admiring*.

Choice (B): No. The word *mystified* means confused and does not match the positive attitude indicated by the phrase *a superb example of life's variety*.

Choice (C): No. The word *reverent* is positive, and thus matches the general direction of the attitude indicated by the phrase *a superb example of life's variety*, but it is too extreme.

Choice (D): No. The word *appalled* is negative and thus does not match the positive attitude indicated by the phrase *a superb example of life's variety*.

Choice (E): No. The word *lachrymose* means sad and does not match the positive attitude indicated by the phrase *a superb example of life's variety*.

The correct answer is (A).

3. **The aye-aye has been listed as an endangered species and, as a result, the government of Madagascar had designated an island off the northeastern coast of Madagascar as a protected reserve for aye-ayes and other wildlife.**

The phrase *author's claim...is unlikely to happen* indicates that this is a Weaken question. The subject of the question is the author's claim. The task of the question is to find the sentence that suggests that this claim is unlikely to come true. To answer this question, determine the meaning of the author's claim and then identify the sentence that shows that this claim is unlikely to come true. The author's claim that *this practice may result in the loss of a superb example of life's variety* refers to the

possible extinction of the aye-aye due to the practice by *the people of Madagascar* of any aye-aye that is *sighted* being *immediately killed*. The final sentence of the first paragraph, which mentions that *an island off the northeastern coast of Madagascar* has been *designated... as a protected reserve for aye-ayes*, would prevent this extinction and is thus the correct answer.

4. **B**

The phrase *can be logically inferred* indicates that this is an Inference question. The task of the question is indicated by the word *inferred*. The subject of the question is *the aye-aye*. In order to answer the question, determine what the passage states about the subject and evaluate the answer choices, eliminating any choice which cannot be supported by the text. The entire passage is about the aye-aye, so look at the answer choices and try to find information in the passage that supports the choice.

Choice (A): No. While the passage does mention that *the government of Madagascar has designated an island off the northeastern coast of Madagascar as a protected reserve for aye-ayes*, the phrase *only lives* in the answer choice is extreme language. The passage does not state the aye-aye *only lives* on the protected reserve, but rather states that the reserve exists and aye-ayes live there. It is possible that aye-ayes still live on the main island of Madagascar.

Choice (B): Correct. The passage refers to the aye-aye as a *nocturnal denizen* and acknowledges the aye-aye's *large, round eyes, which let the aye-aye see well at night*.

Choice (C): No. The phrase *religion* in the answer choice is a memory trap that refers to the passage. The passage states that the people of Madagascar believe that the aye-aye is a type of spirit animal, but does not state that the spirit animal is a part of any practiced religion.

The correct answer is (B).

5. **A**

The question asks what the author of the passage consider *to be most analogous*, which is an indication that this is a type of specific purpose question. The subject of the question is the highlighted passage, which states that *critics seem to presuppose that great literature must be somehow burdensome to the reader; it must be difficult for the uninitiated to understand*. The task of the question is to determine which of the answer choices is most analogous to this viewpoint. In order to answer this question, evaluate the answer choices individually, looking for viewpoints or situations that are similar to the highlighted text.

Choice (A): Correct. This choice mimics the viewpoint of the critics in the passage that they believe great literature must be burdensome to the uninitiated by drawing a comparison to how *avant-garde movies with complicated storylines* are seen in relationship to *Hollywood blockbusters with straightforward narrative*.

Choice (B): No. The choice contains the memory trap *inferior*, which is reminiscent of the passage's claims about the beliefs of critics of great literature. However, this choice does not consider the difficulty the uninitiated

may face when considering the contents of the journal and documentaries, so it is out of scope.

Choice (C): No. This choice discusses that poetry *is considered superior to prose* not because it is burdensome, as is outlined in the passage, but because *it is shorter*. The critics from the passage make no mention of the length of the literature, so this choice is out of scope.

Choice (D): No. The choice uses the extreme language *too controversial* which is a comparison tool that is not employed by the passage, which instead uses as a comparison tool the difficulty the uninitiated have understanding the literature as a prerequisite for success.

Choice (E): No. The inclusion of the phrase *artistically superior* makes this choice out of scope. The passage is not concerned with artistic value.

The correct answer is (A).

6. E

The phrase *can be inferred* indicates that this is an Inference question. The subject of the question is the passage. The task of the question is to determine what can be supported from the passage. In order to answer the question, evaluate the answer choices, eliminating any which cannot be supported by the text.

Choice (A): No. While the passage states that Allende's novel *draws deeply on the author's own family history*, it does not state that the novel is a retelling of her family's political struggles. This choice is a memory trap.

Choice (B): No. While the passage states that the critics' viewpoint prevented Allende's novel *from gaining the critical attention it deserves*, and discusses what critics expect from great literature, it does not indicate how critics treat great literature. This choice is too extreme to be supported.

Choice (C): No. While the passage states that Allende *borrowed...from Gabriel Garcia Marquez* and that she is a power voice in *magical realism*, it does not indicate that Allende learned about magical realism from Marquez. This answer choice is too extreme to be supported.

Choice (D): No. The passage indicates that the *political message* of Allende's novel was included *subtly*, and that this was not *to-be-expected*, but it does not indicate that a clearer political message would have pleased critics. This choice is too extreme to be supported.

Choice (E): Correct. The passage states that, *rather than the to-be-expected socialist harangue, Allende subtly worked her political message within the fabric of her narrative. This agrees with the idea that the novel's political message would have been expected to be stronger than it actually was.*

The correct answer is (E).

7. **E**

The phrase *author would agree* indicates that this is an Inference question. The subject of the question is the author. The task of the question is to determine which choice the author would not agree with. Note that this is an EXCEPT question, which means that the correct answer will be the choice that is NOT supported by the

text. In order to answer the question, determine what the passage says about the subject and evaluate the answer choices, eliminating any choice which can be supported by the text.

Choice (A): No. The passage warns against overlooking *Alcott's importance...to the Transcendental Movement in particular*. This wording supports this choice, which means that the choice should be eliminated since the question asks for the answer choice that is not supported by the text.

Choice (B): No. The passage states that it is *in the text of his orations that one begins to appreciate Alcott as a visionary*. This wording supports this choice, which means that the choice should be eliminated since the question asks for the answer choice that is not supported by the text.

Choice (C): No. The passage states that Alcott *believed that...a student's intellectual growth was concomitant with his or her spiritual growth*. This wording supports this choice, which means that the choice should be eliminated since the question asks for the answer choice that is not supported by the text.

Choice (D): No. The passage states that *Alcott advocated what were at the time polemical ideas on education*. This wording supports this choice, which means that the choice should be eliminated since the question asks for the answer choice that is not supported by the text.

Choice (E): Correct. The passage states that Alcott was an erudite orator, which conflicts with this answer choice. Therefore, this answer choice

cannot be supported by the text, which makes it the correct choice.

The correct answer is (E).

8. **B**

The phrase *author would agree* indicates that this is an Inference question. The subject of the question is the author. The task of the question is to determine what can be inferred about the author's views. In order to answer the question, evaluate the answer choices, eliminating any choice which cannot be supported by the text.

Choice (A): No. The passage does criticize *Alcott's philosophical treatises* as *esoteric*, but it does not describe Transcendentalism in this way. This answer choice is recycled language and cannot be supported by the passage.

Choice (B): Correct. The passage states that *Alcott's gift was not as a writer*, which supports the answer choice.

Choice (C): No. The passage states that Alcott believed that *good teaching should be Socratic* and that *intellectual growth was concomitant with...spiritual growth*. This indicates that both factors can be part of good teaching. It is too extreme to assume that aligning these factors is *difficult*.

Choice (D): No. The passage states that *to remember the man [Alcott] solely by his associations is to miss his importance*. This contradicts the answer choice's assertion that Alcott should be chiefly known for the strengths of his associations. This answer choice is a reversal of the passage.

Choice (E): No. The passage states that, *in the text of his orations...Alcott advocated what were at the time polemical ideas*. This contradicts the answer choice's assertion that *Alcott's orations were widely accepted by his peers*. This answer choice is a reversal of the passage.

The correct answer is (B).

9. **B**

The phrase *demonstrates the idea put forth* indicates that this is a Retrieval question. The subject of the question is the author's idea regarding animal classification. The task of the question is to find the choice or choices that demonstrate this idea. In order to answer the question, determine what the passage states about the subject and evaluate the answer choices, eliminating any choice which cannot be supported by the text.

Choice (A): No. The passage states that *taxonomic classification...is useful only when considered along with other information*, which is not consistent with *scientists rely[ing] solely on the traditional taxonomic designations*. This answer choice is a reversal of the information in the passage.

Choice (B): Correct. The example of a team of researchers that monitors the actions of the animals and compares its findings with prevailing beliefs is consistent with the passage's statement that taxonomic classification...is useful only when considered along with other information.

Choice (C): No. The passage states that *taxonomic classification...is useful only when considered along with other information*, which is not consistent with a zookeeper who disregards taxonomic classifications and

instead focuses on observational data. This choice is a reversal of the information in the passage.

The correct answer is (B).

10.

B

The word *tone* indicates that this is a tone question. The subject of the question is the author's tone. The task of the question is to identify the word that describes this tone. In order to answer the question, determine what the passage indicates about the subject and evaluate the answer choices, eliminating any choice which cannot be supported by the text. The author focuses on scientific distinctions and uses words such as *actually*, *fascinating*, *ultimately*, and *likewise* to make specific observations. Thus, the author's tone is focused on clarifying scientific distinctions.

Choice (A): No. The author does not offer any strong negative opinion. This is not consistent with the answer choice *exasperated*.

Choice (B): Correct. The author's informational tone in the passage is consistent with this answer choice.

Choice (C): No. The author indicates detailed distinctions regarding animal classification. This position is not consistent with the answer choice *ambivalent*.

Choice (D): No. The author provides information regarding animal classification but does not offer any strong negative opinion. This is not consistent with the answer choice *morose*.

Choice (E): No. The author provides information regarding animal classification but does not offer any strong positive opinion. This is not consistent with the answer choice *laudatory*.

The correct answer is (B).

CHAPTER 7: CRITICAL REASONING

Practice: Identifying Conclusions

1. “it is unlikely that the new defense bill will pass”
2. “grass was not a significant part of the dinosaur diet”
3. “automaker *X* will have no choice but to file for bankruptcy”
4. “country *Y* will experience a decrease in obesity-related health problems”
5. “machines will soon outnumber humans as the number-one users of the Internet”

Practice: Finding the Premise

1. **Premise:** “A bipartisan group of 15 senators has announced that it does not support the legislation.”
2. **Premises:**
 - (1) “The earliest known grass fossils date from approximately 55 million years ago.”
 - (2) “Dinosaurs most likely disappeared from the earth around 60 million years ago.”
 - (3) “fossilized remains of dinosaur teeth that indicate the creatures were more suited to eating ferns and palms”
3. **Premises:**
 - (1) “company’s poor financial situation”

(2) “the workers at automaker X are threatening to go on strike”

4. **Premise:** “the leading members of the nation’s food industry have agreed to provide healthier alternatives, reduce sugar and fat content, and reduce advertisements for unhealthy foods”
5. **Premise:** “Recent advances in technology have led to a new wave of ‘smart’ appliances”

Practice: Locating Assumptions

1. **Conclusion:** There will be no decline in enrollment at the University.

Why?

Premise: The University plans to hire two highly credentialed biology professors to replace Professor Jones.

Assumption: That the two new biology professors will be at least as attractive to prospective students as was Professor Jones.

2. **Conclusion:** “It is unjust to charge customers under the age of 25 more to rent a car than those over the age of 25.”

Why?

Premise: “Most states allow people as young as 16 to have a driver’s license and all states allow 18-year-olds the right to vote.”

Assumption: Because people under the age of 25 have the right to vote and drive, there is no reason to charge them more to rent a car.

3. Conclusion: “Roughly 12.5 percent of planets in the universe should have life on them.”

Why?

Premise: “In our solar system, there are eight planets and at least one of them obviously has life on it.”

Assumption: All planetary systems in the universe have the same proportion of planets with life on them as does our solar system.

4. Conclusion: “The leaders of State A should institute the gas tax.”

Why?

Premise: “58 percent of voters in Township B approve of a proposed 2-cent gasoline tax.”

Assumption: The opinion of Township B is representative of the opinion of all of State A.

Critical Reasoning Practice Set

1. **B**

Fact 1: In 1989, corporate tax rates in some regions of the United States fell to their lowest level in 15 years, while rates in other regions reached new highs.

Fact 2: In 1974, similar conditions led to a large flight of companies from regions with unfavorable corporate tax policies to regions with favorable policies.

Fact 3: There was, however, considerably less corporate flight in 1989.

The question asks *Which of the following, if true about 1989, most plausibly accounts for the finding that there was less corporate flight in 1989?*, which means this is a resolve/explain question. The correct answer will explain why there was less corporate flight in 1989.

Choice (A): No. The numbers of similar companies in regions with favorable tax policies in 1989 compared with 1974 does not explain why there was less corporate flight. This answer choice is out of scope.

Choice (B): Correct. This answer choice states that office rental costs in regions with the most favorable tax policies were significantly higher in 1989 than in 1974. This explains why corporate flight was less in 1989 than in 1974.

Choice (C): No. The benefits to areas with the most favorable tax policies and the difficulty of deciphering the tax codes does not explain why there was less corporate tax flight in 1989. This answer choice is out of scope.

Choice (D): No. Higher tax incentive offered by foreign countries makes it harder to explain why there was less corporate flight in 1989.

Choice (E): No. The question makes no reference to individual tax incentives. This answer choice is out of scope.

2. C

The question asks *Which of the following statements best describes Tello's response to Aramayo?*

Aramayo's premise is that *Our federal government seems to function most efficiently when decision-making*

responsibilities are handled by only a few individuals. Aramayo's conclusion is that *Therefore, our government should consolidate its leadership and move away from a decentralized representative democracy.*

Tello responds by saying *But moving our government in this direction could violate our constitutional mission to provide government of, for, and by the people*, which means that Tello's response points out a negative consequence with the argument used by Aramayo. The correct answer identifies the reasoning Tello uses to respond to Aramayo.

Choice (A): No. Tello's response *But moving our government in this direction could violate our constitutional mission to provide government of, for, and by the people* does not contradict Aramayo's argument.

Choice (B): No. This answer choice is only partially correct. Tello's response is that there are negative consequences with the argument used by Aramayo.

Choice (C): Correct. Tello's response points out a negative consequence to Aramayo's argument.

Choice (D): No. Tello's response does not uncover any circular reasoning used by Aramayo.

Choice (E): No. Tello's response does not point out any overgeneralization used by Aramayo.

3. **B**

The question states that *many businesses experience dramatic gains in productivity after installing a new computer system*, and that *a well-respected business journal recently stated that the person who serves as the*

Chief Information Officer is the consummate business computer system. The premise is that installing a new computer system will lead to dramatic gains in productivity.

The question asks *By comparing a Chief Information Officer to business computer systems, the journal implicitly argues that...,* which means the correct answer shows why the journal made the comparison between a Chief Information Officer and a business computer system.

Choice (A): No. The journal made no reference to the actual function of a Chief Information Officer. This answer choice is out of scope.

Choice (B): Correct. The question states that installing a new computer system leads to dramatic gains in productivity. The journal stated that the person who serves as the Chief Information Officer is the consummate business computer system. So, installing a new computer system is like hiring a Chief Information Officer.

Choice (C): No. The journal made no reference to what many companies experience with new computer systems. This answer choice is out of scope.

Choice (D): No. The journal made no comparison between the relative effectiveness of a Chief Information Officer and a new computer system. This answer choice is out of scope.

Choice (E): No. The journal made no reference to the difficulty of measuring the impact of a Chief Information Officer on a company's productivity. This answer choice is out of scope.

4. **B**

Conclusion: Laundry done at the Main Street Laundromat is cleaner than laundry done at the Elm Street Laundromat because the Main Street Laundromat uses more water per load.

Premise: Whenever Joe does his laundry at the Main Street Laundromat, the loads turn out cleaner than when he does his laundry at the Elm Street Laundromat.

Assumptions:

(1) It's not a coincidence. It's not a coincidence that laundry done at the Main Street Laundromat is cleaner than laundry done at the Elm Street Laundromat. (2) There's no other cause. Nothing else causes laundry done at the Main Street Laundromat to be cleaner than laundry done at the Elm Street Laundromat.

The question asks *Which of the following statements, if true, helps support the conclusion above?*, which means this is a Strengthen question. The assumption is that it is not a coincidence that laundry done at the Main Street Laundromat is cleaner than laundry done at the Elm Street Laundromat, and that there's no other cause than the Main Street Laundromat uses more water per load. In order to strengthen the argument, the correct answer shows how it is not a coincidence, or that other causes have been ruled out.

Choice (A): No. This is a restatement of the conclusion and does not rule out an alternate cause.

Choice (B): Correct. This choice rules out Joe using different detergents at both laundromats as a possible cause.

Choice (C): No. The question makes no reference to the Oak Street Laundromat. This answer choice is out of scope.

Choice (D): No. The question makes no reference to the amount of laundry Joe does at each laundromat. This answer choice is out of scope.

Choice (E): No. This answer choice states that *Joe tends to do his dirtier laundry at the Elm Street Laundromat*. The question states that *Whenever Joe does his laundry at the Main Street Laundromat, the loads turn out cleaner than when he does his laundry at the Elm Street Laundromat*. So, because Joe *tends* to do his dirtier laundry at the Elm Street Laundromat, it means that sometimes Joe does his dirtier laundry at the Main Street Laundromat. The question makes no exception for when Joe does dirtier laundry at the Main Street Laundromat. This answer choice is out of scope.

5. A

Conclusion: The enormous increase in complaints must be a result of this systematic change.

Premises: According to the United States Postal Service bureau of information, the rate of complaints concerning late delivery was 30 times higher in 1991 than in 1964, and the United States Postal Service changed neighborhood routes from a multiple-truck delivery system to a single-truck delivery system between 1964 and 1991.

Assumptions:

It's not a coincidence. It's not a coincidence that the rate of complaints concerning late delivery was 30 times higher in 1991 than in 1964.

There's no other cause. There's no other cause that the rate of complaints concerning late delivery was 30 times higher in 1991 than in 1964.

The question asks *Which of the following, if true, weakens the conclusion drawn above?*, which means this is a Weaken question. The assumptions are that it is not a coincidence that the rate of complaints concerning late delivery was 30 times higher in 1991 than in 1964, and that there's no other cause than the United States Postal Service changed neighborhood routes from a multiple-truck delivery system between 1964 and 1991. In order to weaken the argument, the correct answer choice shows that it is a coincidence, or that there is another possible cause.

Choice (A): Correct. The answer choice states that *In 1991, most late-mail complaints were reported to the appropriate United States Postal Service office, whereas in 1964 most were not.* If true, this is another possible cause for the increase in complaints in 1991 than in 1964.

Choice (B): No. The question makes no reference to the number of late deliveries in a multiple-truck delivery system. This answer choice is out of scope.

Choice (C): No. The question makes no reference to registered mail. This answer choice is out of scope.

Choice (D): No. This answer choice rules out the amount of bulk mail being much larger in 1991 than in 1964 as a possible cause. This answer choice strengthens the argument.

Choice (E): No. The question makes no reference to the price of stamps. This answer choice is out of scope.

CHAPTER 8: VOCABULARY FOR THE GRE

Group 1 Exercises

1. C
2. J
3. E
4. G
5. A
6. L
7. K
8. B
9. N
10. H
11. M
12. I
13. D
14. F

Group 2 Exercises

1. B
2. M
3. F
4. J
5. N
6. A

- 7. D**
- 8. E**
- 9. L**
- 10. C**
- 11. H**
- 12. I**
- 13. G**
- 14. K**

Group 3 Exercises

- 1. D**
- 2. G**
- 3. K**
- 4. I**
- 5. M**
- 6. A**
- 7. C**
- 8. N**
- 9. H**
- 10. F**
- 11. E**
- 12. B**
- 13. J**
- 14. L**

Group 4 Exercises

- 1. I**
- 2. L**
- 3. N**
- 4. C**
- 5. K**
- 6. B**
- 7. J**
- 8. A**
- 9. G**
- 10. E**
- 11. M**
- 12. D**
- 13. H**
- 14. F**

CHAPTER 10: MATH FUNDAMENTALS

Math Fundamentals Drill

1. **C, D, and F**

To solve this problem, try writing out the possibilities. The least prime number is 2. $(2 \times 2) + 3 = 7$; so (C) is correct. The next prime number is 3: $(3 \times 3) + 5 = 14$, so (D) is correct. The next prime number is 5: $(5 \times 5) + 7 = 32$, which is not an answer choice. The next prime number is 7: $(7 \times 7) + 11 = 60$, so (F) is correct. The next prime number is 11: $(11 \times 11) + 13 = 134$, which is a greater value than the answer choice possibilities. The correct answer is (C), (D), and (F).

2. **C**

To answer this question, first write an equation with the information given. So, *number of cases ordered* $\times \$1,757 =$ *total amount of money spent*. Now begin figuring out the answer to Quantity A and the answer to Quantity B. The number of books is equal to *number of cases* $\times 150$, so it is possible to figure out how many cases were sold. Set up the equation and solve. *Cases* $\times \$1,757 = \$10,550$, so

$$\text{Cases} = \frac{\$10,550}{\$1,757} = 6.004 \text{ cases. Since it is not possible to}$$

order a partial case, only 6 cases can be ordered for \$10,550. This results in $6 \times 150 = 900$ books. Solve for

Quantity B in the same way. $Cases \times \$1,757 = \$12,290$, so

$$Cases = \frac{\$12,290}{\$1,757} = 6.99 \text{ cases. Since it is not possible to}$$

order a partial case, once again, only 6 cases can be

ordered and Quantity B equals 6×150 , or 900. The

quantities are equal, and the correct answer is (C).

3. A and E

To begin, find the factors of 91: 1 and 91 or 7 and 13.

Remember that the product of two negative numbers is positive, so the integers could also be negative factors. The question asks for the sum of the two integers. Choice (A) is the sum of -91 and -1. Choice (E) is the sum of 7 and 13. None of the other answer choices are possible, so the correct answer is (A) and (E).

4. D

List all of the distinct prime integers less than 20. The prime integers are 2, 3, 5, 7, 11, 13, 17, and 19. The problem asks for the sum, so add all of the values up to yield $2 + 3 + 5 + 7 + 11 + 13 + 17 + 19 = 77$. The ones digit is a 7, so the correct answer is (D).

5. B, C, and D

A \$20 scarf can be discounted as much as 50 percent, and

$$50 \text{ percent of } 20 \text{ is } \$20 \times \frac{50}{100} = \$10, \text{ so the minimum sale}$$

price of a scarf is $\$20 - \$10 = \$10$. The least discount is 25

$$\text{percent, and 25 percent of } 20 \text{ is } \$20 \times \frac{25}{100} = \$5, \text{ so the}$$

maximum sale price of a scarf is $\$20 - \$5 = \$15$.

Therefore, the range of possible sale prices for scarves is \$10 to \$15. Now, eliminate choices that fall outside of that range. Choice (A) is less than \$10, and (E) is greater than \$15, so eliminate both of them. The correct answer is (B), (C), and (D).

6. 300

There are 3 terms in the sequence and they repeat. The question asks about the product of the 81st, 82nd, 83rd, 84th, and 85th term. Use the fact that the values of the terms in the sequence repeat after every third term to determine the value of the 81st term. Divide 81 by 3 to find that there are 27 complete iterations of the sequence. The 81st term is at the end of one of these repetitions, so its value is -5 . Therefore, the 82nd term is -2 , the 83rd is 3 , the 84th is -5 , and the 85th is -2 . Therefore, the product is $(-5) \times (-2) \times 3 \times (-5) \times (-2) = 300$. The correct answer is 300.

7. C

Recognize the Distributive Law at work here. If the expression in Quantity A is distributed, the resulting expression is $2x + 8y$, which is the same as Quantity B. Therefore, the two quantities are equal, and the correct answer is (C).

8. A

Quantity A is the greatest number of consecutive nonnegative integers whose sum is less than 22, so start

adding the numbers with the least value. However, Quantity A contains an important clue with the word *nonnegative*. This means that the number 0 could be a value. Start with 0 and add until the sum is the greatest it could be without exceeding 22. So $0 + 1 + 2 = 3$; $3 + 3 = 6$; $6 + 4 = 10$; $10 + 5 = 15$; and $15 + 6 = 21$. Therefore, the consecutive nonnegative integers whose sum is less than 22 are 0, 1, 2, 3, 4, 5, and 6. That is 7 values. Quantity A is greater than Quantity B, and the correct answer is (A).

9. **D**

The question asks for the greatest possible value of $x + y$. Therefore, find the greatest values of x and y . The greatest value of x is when 4 is divided by 6, which produces a remainder of 4. The greatest value of y is when 2 is divided by 3, which produces a remainder of 2. Therefore, the greatest value of $x + y$ is 6, and the correct answer is (D).

10. **E**

Follow the order of operations. Start with the parentheses first and do the division and multiplication, so

$12 - \left(\frac{6}{3} - 4 \times 3 \right) - 8 \times 3 = 12 - (2 - 12) - 8 \times 3$. Now finish the parentheses to find that the expression is $12 - (-10) - 8 \times 3$. Now multiply so that the expression is $12 - (-10) - 24$.

Now work the rest of the problem to find that $22 - 24 = -2$, and the correct answer is (E).

CHAPTER 11: ALGEBRA (AND WHEN TO USE IT)

Algebra (And When to Use It) Drill

1. **19**

Plug In \$100 for the cost of the item to the retailer. Therefore, the original selling price is \$140, or 40 percent more than the retail price. To find the reduced price, subtract 15 percent of \$140 from \$140 to get \$119. The difference between the reduced price and the cost of the item to the retailer is then $\$119 - \$100 = \$19$. Therefore, the question is asking what percent of 100 is 19. The correct answer is 19 percent.

2. **B**

First, put the equation in standard form: $x^2 + 8x + 7 = 0$. Now factor: $(x + 7)(x + 1) = 0$. Solve: $x = -7$ or -1 . Both of the possible values for x are negative, so Quantity B is always greater than Quantity A.

3. **27**

Because $9 = 3^2$; the original equation becomes $3^3 \times (3^2)^{12} = 3^x$; or, $3^3 \times 3^{24} = 3^x$; or, $3^{3+24} = 3^x$. Therefore, $x = 27$.

4. **E**

Because there are variables in the answers, Plug In. Let's make $x = 10$, $y = 7$, and $c = 3$. Then $A = 2 \times 10 - (7 - 2 \times 3)$. Solve for the numbers in the parentheses before subtracting: $A = 20 - (7 - 6)$. Therefore, $A = 19$. $B = (2 \times 10 - 7) - 2 \times 3$. Again, solve for the numbers in the

parentheses before subtracting: $B = (20 - 7) - 6$. Therefore, $B = 7$. Be careful, the question is asking for $A - B = 19 - 7 = 12$. Plug $y = 7$ and $c = 3$ into the answers. Only (E) yields the target, 12. Choice (C) is a trap designed to catch test takers who subtracted before simplifying the numbers in the parentheses.

5. **A**

While the relationship among the can prices is provided, no actual numbers are supplied, so try plugging in some numbers for can prices. A good number to choose for the cost of the large cans is the value of the small can multiplied by the value of the medium can, or $\$5 \times \$7 = \$35$. This means the medium can costs $\frac{\$35}{\$5} = \$7$, and the small can costs $\frac{\$35}{\$7} = \$5$. The amount of money needed to buy 200 medium cans is $200 \times \$7 = \$1,400$. Now PITA. Start with (C). If the customer purchases 72 small cans, that will cost her $72 \times \$5 = \360 . If she purchases 72 small cans, she also purchases 72 large cans so $72 \times \$35 = \$2,520$, which is more than the \$1,400 spent on medium cans. This number is too great, so eliminate (C), (D), and (E). Choice (B) also works out to be too great, which leaves (A). 35 small cans $\times \$5$ a can = \$175. 35 large cans $\times \$35 = \$1,225$. $\$1,225 + \$175 = \$1,400$, the same price as

the medium cans. Choice (A) is correct.

6. **25**

Stack and add the first two equations. Multiply the second equation by -1 .

$$\begin{array}{r} 6k - 5l = 27 \\ + \underline{2k - 3l = 13} \\ 8k - 8l = 40 \end{array}$$

Divide by 8 to yield $k - l = 5$. Multiply by 5 to yield the final answer of $5k - 5l = 25$.

7. **B**

This problem has a relationship between variables, so Plug In. Let $a = 2$, so $3a = 6$. 6 is 4 less than 10, which equals

6b. $6b = 10$ yields that $b = \frac{10}{6}$. $a - 2b$ yields

$$2 - 2\left(\frac{10}{6}\right) = -\frac{8}{6}, \text{ or } -\frac{4}{3}.$$

8. **A**

Work with one quantity at a time to compare them.

Quantity A is $\frac{2^{-4}}{4^{-2}}$, which can be rewritten as

$\frac{2^{-4}}{4^{-2}} = \frac{\frac{1}{2^4}}{\frac{1}{4^2}} = \frac{\frac{1}{16}}{\frac{1}{16}}$. This fraction can be manipulated by

moving the fraction out of the denominator; however, that

is unnecessary as the numerator and denominator are the

same thing. So $\frac{1}{\frac{16}{1}} = 1$, which is the value of Quantity A.

Quantity B can be simplified to $\frac{\sqrt{64}}{-2^3} = \frac{8}{-8} = -1$. Therefore,

Quantity A is greater, and the answer is (A).

9. B

This is a simultaneous equation question. Both quantities ask for the value of $x + y$, so try to combine the equations to find that value. If you multiply $3x + 4y = 12$ by 3, the result is $9x + 12y = 36$. This can be subtracted from the other equation to find that $2x + 2y = -6$. Divide both sides of the equation by 2 to find that $x + y = -3$. Quantity A, then, is equal to -3 . Quantity B is now $(-3)^{-2}$, which can be rewritten as $\frac{1}{(-3)^2} = \frac{1}{9}$. Therefore, Quantity B is greater than Quantity A, and the correct answer is (B).

10. E

Since there are variables in the answers, Plug In. If $a = 3$ and $b = 2$, then $x = 9$ and $y = 18$. So, $2(x + y) = 2(9 + 18) = 54$. So, 54 is the target. Now, evaluate each answer choice. Choices (A), (B), (C), and (D) all evaluate to 54 and match the target. Choice (E), however, equals 36. Since the

question uses the word EXCEPT, choose the answer that doesn't match the target. Choice (E) is the correct answer.

CHAPTER 12: REAL-WORLD MATH

Real-World Math Drill

1. $\frac{1}{6}$

Plug In to solve this problem. When working with fractions, a good number to Plug In is the product of the denominators. The fractions used in the problem are $\frac{1}{3}$ and $\frac{1}{2}$, so Plug In $3 \times 2 = 6$ for the number of paintings Sadie started with. Sadie started with 6 paintings and gave away one-third of them: $6 \times \frac{1}{3} = 2$. She has 4 paintings left. She then sold another half of the original 6: $6 \times \frac{1}{2} = 3$. So, she has 1 painting left, or $\frac{1}{6}$ of the total.

2. **D**

When there are variables in the question stem, it's time to Plug In. For this problem, it's easier to Plug In if you simplify the equation first. Rearrange the equation to put the variables on opposite sides of the equal sign. $8x = 4y$. Then divide both sides by 4 to get that $2x = y$. Now, choose some easy numbers such as $x = 2$ and $y = 4$. In this case, Quantity B is greater, so eliminate (A) and (C). Next, try something like $x = 0$ and $y = 0$. In this case, the two quantities are equal. Eliminate (B), and the correct answer is (D).

3. **D**

The population rankings for Year X are as follows: (1) Massachusetts, (2) Connecticut, (3) Maine, (4) Rhode Island, (5) New Hampshire, (6) Vermont. The rankings for Year Y are as follows: (1) Massachusetts; (2) Connecticut; (3) Rhode Island; (4) New Hampshire; (5) Maine; (6) Vermont. Maine, Rhode Island, and New Hampshire have different rankings from Year X to Year Y .

4. **D**

In Year X , Vermont's population is 5 percent of 15 million (or 0.75 million), and the population of Massachusetts is 40 percent of 15 million (or approximately 6 million). 6 million is what percent of 0.75 million? Now translate: $6 \text{ million} = \frac{x}{100} \times 0.75 \text{ million}$: $x = 800$.

5. **D**

In Year X , the population of Rhode Island was 10 percent of 15 million, or 1.5 million. In Year Y , the population of Rhode Island was 15 percent of 25 million, or 3.75 million. The increase was 2.25 million, or 2,250,000.

6. **C**

This question asks for a specific number and the answer choices are integers in order from least to greatest, which means that Plug In the Answers might be a good approach. However, that would mean constructing a rather involved equation. A better approach might be to construct a short

3 column table (see below), with headings for *Days*, (Amount to) *Add*, and *Gallons* (in the jug).

Days	Add (50% of current)	Gallons
0	—	4 (20% of \times 20 gal.)
3	$50\% \times 4 = 2$	6
6	$50\% \times 6 = 3$	9
9	$50\% \times 9 = 4.5$	13.5
(12)	$50\% \times 13.5 = 6.75$	$20.25 \geq 17$

The question states that the 20-gallon jug is 20% full to start. So enter “0” in the *Days* column and $20\% \times 20 = 4$ in the *Gallons* column. The question states that every 3 *Days*, an amount of water equal to 50% of the amount already in the jug is added to the jug. So in the next line enter “3” in the *Days* column, $50\% \times 4 = 2$ in the *Add* column, and $4 + 2 = 6$ in the *Gallons* column. In the next line, enter “6” in the *Days* column, $50\% \times 6 = 3$ in the *Add* column, and $6 + 3 = 9$ in the *Gallons* column. The question asks how many *Days* until the jug is at least 85% full. $85\% \times 20 = 17$, so continue filling in the table until the number of gallons in the jug is greater than or equal to 17. The correct answer is (C). Note that (A) is a trap answer that represents the number of *times* (4) water needs to be added to the jug so the total gallons in the jug is greater than or equal to 17.

7. **A**

This is an average question, so make an Average Pie any time the word *average* is used. Begin by figuring out how many supporters of the referendum are in each town. The question states that there is an average of 3,500 supporters in Towns *B* and *D*, so there is a total of $3,500 \times 2 = 7,000$ supporters in these towns. The question also

states that Town *B* has 3,000 supporters, so the number of supporters in Town *D* is $7,000 - 3,000 = 4,000$.

Additionally, the question states that there is an average of 5,000 supporters in Towns *A* and *C*, so there is a total of $5,000 \times 2 = 10,000$ supporters in these towns. It's also stated that Town *A* has 3,000 supporters, so the number of supporters in Town *C* is $10,000 - 3,000 = 7,000$. Now, compare the quantities. Quantity A is the average number of supporters for Towns *C* and *D*, and Quantity B is the average number of supporters for Towns *B* and *C*. Because both quantities use Town *C*, and both quantities ask for an average, those values cancel out and all that remains is to compare the number of supporters in Towns *B* and *D*.

There are 3,000 supporters in Town *B* and 4,000 in Town *D*, so Quantity A is greater, and the correct answer is (A).

Alternatively, solve for the average given in both quantities. However, the result is the same; the correct answer is (A).

8. **E**

The question states that \$500,000 was given to employees rated *A*, *B* or *C* as follows: *A* employees received twice the amount that *C* employees received, and *B* employees received one and a half the amount that *C* employees received. There were 50 *A* employees, 100 *B* employees and 150 *C* employees. The question asks how much was paid to each *A* employee. The answers are in order from least to greatest, so Plug In the Answers. Begin with (C). If

\$740 was paid to each *A* employee, then $\frac{\$740}{2} = \370 was

paid to each *C* employee, and $1.5 \times \$370 = \555 was paid to each *B* employee, which means that the total amount paid to all employees would be equal to

$(50 \times \$740) + (100 \times \$555) + (150 \times \$370) = \$148,000$. This is quite short of \$500,000, so eliminate (A), (B), and (C).

Try (D). If \$1,250 was paid to each *A* employee, then

$\frac{\$1,250}{2} = \625 was paid to each *C* employee, and $1.5 \times$

$\$625 = \937.50 was paid to each *B* employee, which means that the total amount paid to all employees would be equal to $(50 \times \$1,250) + (100 \times \$937.50) + (150 \times \$625) = \$250,000$. Eliminate (D). The correct answer is (E). Note that \$250,000 is one-half of \$500,000, and \$1,250, (D), is one-half of \$2,500, (E).

9. **B**

The question asks what the median reading test score was for ninth grade students in 2013. The median is the middle score, or the 50th percentile. The distribution of scores for ninth grade students is shown in the first pie chart. The chart shows that 16% of ninth grade students had scores below 65. The chart shows that 37% of ninth grade students scored in the 65–69 point range. $16\% + 37\% = 53\%$, which means that the 50th percentile is in the 65–69 point range. The correct answer is (B).

10. **A**

The question states that the number of students in grades 9 through 12 represents 35% of the total students at School District X in 1995 and asks how many total students were in School District X in 1995. Information about 1995 is found on the first chart. Looking at the solid line data, in 1995 there were 1,350 students in 9th grade, 950 students in 10th grade, 625 students in 11th grade, and 500 students in 12th grade. $1,350 + 950 + 625 + 500 = 3,425$ students in grades 9 through 12. If T represents the total number of students in 1995, then $3,425 = 0.35 \times T$, which means that $\frac{3,425}{0.35} = T = 9,785 \approx 9,700$. The correct answer is (A).

11. **E**

There were 1,200 ninth-graders in 2013. 25 percent of them, or 300, scored in the 70–79 point range. 14 percent, or 168, scored in the 80–89 point range. The difference between 300 and 168 is 132. The correct answer is (E).

12. **D**

This is a question about ratios, so draw ratio boxes for each ratio. The question states that one ounce of Solution X contains ingredients a and b in the ratio of 2:3, which means that for every 2 parts of a there are 3 parts of b . That makes 5 parts in total. So, enter 2, 3 and 5 in the top row of a ratio box marked Solution X. One ounce of

Solution Y contains ingredients a and b in the ratio of 1:2, which means that for every 1 part of a there are 2 parts of b . That makes 3 parts in total. So, enter 1, 2, and 3 in the top row of a ratio box marked Solution Y . The combined solution of 630 ounces contains Solution X and Solution Y in the ratio of 3:11, which means that for every 3 ounces of Solution X there are 11 ounces of Solution Y . That makes 14 ounces in total. So, enter 3, 11, and 14 in the top row of a ratio box marked Combined, and enter 630 in the last row under the Total column in the Combined ratio box. Divide 630 by 14 to get 45 as the multiplier in the Combined ratio box. Multiply 45 times 3 to get 135 ounces of Solution X , and multiply 45 times 11 to get 495 ounces of Solution Y . Enter 135 in the last row under the Total column in the Solution X ratio box and enter 495 in the last row under the Total column in the Solution Y ratio box. Now divide 135 by 5 to get 27 as the multiplier in the Solution X ratio box and divide 495 by 3 to get 165 as the multiplier in the Solution Y ratio box. The question asks how many ounces of ingredient a are in the combined solution. Multiply 27 times 2 to get 54 ounces of ingredient a from Solution X and multiply 165 times 1 to get 165 ounces of ingredient a from Solution Y . Add 54 plus 165 to get 219 ounces of ingredient a . The correct answer is (D).

Solution X			
	a	b	Total
Ratio	2	3	5
Multiplier	27	27	27
Totals	(54)	81	135

Solution Y			
	a	b	Total
Ratio	1	2	3
Multiplier	165	165	165
Totals	(165)	330	495

Combined			
	Sol. X	Sol. Y	Total
Ratio	3	11	14
Multiplier	45	45	45
Totals	135	495	630

CHAPTER 13: GEOMETRY

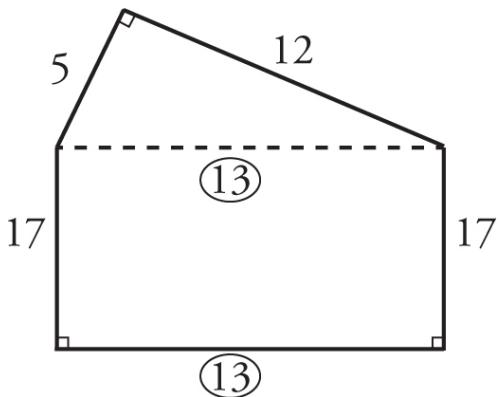
Geometry Drill

1. A, B, and C

The three interior angles of a triangle add up to 180° . A right triangle has one 90° angle, which means the remaining two angles in a right triangle must add up to $180^\circ - 90^\circ = 90^\circ$. So, look for answer choices where the angles add up to 90° . The correct answers are (A), ($20^\circ + 70^\circ = 90^\circ$), (B), ($30^\circ + 60^\circ = 90^\circ$), and (C), ($45^\circ + 45^\circ = 90^\circ$).

2. B

Redraw the figure. The perimeter is the sum of all sides of the figure. This is a pentagon with three right angles, which means that the figure is the combining of a right triangle and a rectangle, as shown by the dotted line in the figure below. The unknown side of the figure is equal to the hypotenuse of the right triangle. The right triangle has legs of 5 and 12, which means the hypotenuse is equal to $\sqrt{5^2 + 12^2} = 13$. Add all the sides to get $17 + 5 + 12 + 17 + 13 = 64$. The correct answer is (B).



3. **A**

The question states that $AB = BC = EG$. The three angles of the triangle are equal, which means that the triangle is equilateral, and that $EG = FG = 8$. The side of the square is equal to $FG = 8$, which means the area of the square is equal to $8^2 = 64$. The correct answer is (A).

4. **D**

Draw the XY coordinate plane and attempt to plot the two points in the question. The first point $(a, 6)$ is in Quadrant I, which means that a is any positive number. The second point $(-6, b)$ is in Quadrant II, which means that b is also any positive number. So, a could be 1 and b could be 2, or a could be 2 and b could be 1. The correct answer is (D).

5. **E**

There is a variable in the question and in the answer choices, so Plug In. The question states that the longer piece is 2 yards longer than 3 times the shorter piece. If the shorter piece is 2 yards, then the longer piece is $3 \times 2 + 2 = 8$ yards, which means that the total length t of twine is

$2 + 8 = 10$ yards. The question asks what is the length of the longer piece in terms of t . The length of the longer piece is 8, so the target is 8. Plug In $t = 10$ in the answer choices. Choice (A) is $\frac{10 + 3}{3} = \frac{13}{3}$. Eliminate (A). Choice (B) is $\frac{3 \times 10 + 2}{3} = \frac{32}{3}$. Eliminate (B). Choice (C) is $\frac{10 - 2}{4} = 2$. Eliminate (C). Note that (C) is equal to the length of the shorter piece. Choice (D) is $\frac{3 \times 10 + 4}{4} = \frac{34}{4}$. Eliminate (D). Choice (E) is $\frac{3 \times 10 + 2}{4} = 8$, which is equal to the length of the longer piece, the target answer. The correct answer is (E).

6. **D**

The question asks for the area of semicircle EAB . The question states that the circle with center D has a radius of 3 because $CD = 3$, which means that the diameter of the smaller circle is equal to $2 \times 3 = 6$. The radius of the larger circle with center C is the diameter of the smaller circle, which is equal to 6. So, the area of the larger circle is $\pi 6^2 = 36\pi$. The area of semicircle EAB is equal to one half the area of the larger circle, so one half of 36π is 18π . The correct answer is (D).

7. **2**

Draw a diagram. The question states that Karl started x meters below the boat and then swam 8 meters straight down, which puts Karl $x + 8$ meters below the boat. Karl

makes a right turn and swims parallel to the water 24 meters. He then swims 26 meters directly back to the boat. This completes a right triangle with a hypotenuse of 26 meters and legs of 24 and $x + 8$ meters. Use the Pythagorean Theorem to show that 10^2 meters + 24^2 meters = 26^2 meters. So, this is a 10-24-26 triangle, which is twice the sides of a familiar 5-12-13 triangle. The question asks for the value of x , the number of meters below the boat that Karl began his dive from, which is found by the equation $x + 8 = 10$, so $x = 2$.

8. A

There is a variable in both quantities, so Plug In. Try $r = 2$. The circumference of a circle with radius 2 equals $4\pi \approx 12$, and the perimeter of a square with side 2 equals $4 \times 2 = 8$. Try $r = 10$. The circumference of a circle with radius 10 equals $20\pi \approx 60$, and the perimeter of a square with side 10 equals $4 \times 10 = 40$. Quantity A is greater than Quantity B, so the correct answer is (A).

9. C

Draw a circle with center C and points A and B on the circumference of the circle and draw triangle ABC . The question states that the area of the circle is $25\pi = \pi r^2$, which means that the radius of the circle is 5. Because sides AC and BC of triangle ABC are equal to the radius of the circle, they are each equal to 5. The question states that angle $ACB = 60^\circ$, which means that angles CAB and CBA are also equal to 60° , and that triangle ABC is equilateral. So, $AB = AC = BC = 5$. The correct answer is (C).

10. A

The question asks if the length of the third side of a triangle, x , is greater than or less than 5.9. The third side of a triangle is greater than the difference and less than the sum of the other two sides. The other two sides of the triangle are 9 and 3, which means that the difference is $9 - 3 = 6$, and the sum is $9 + 3 = 12$. So, x is greater than 6 and less than 12, which means that x is greater than 5.9. The correct answer is (A).

11. **A**

The question states that $AB = BC$, which means that triangle ABC is isosceles, and that triangle ABC is the combining of two right triangles, each with a hypotenuse of 10 and legs of 5 and $\frac{10}{2} = 5$. So, triangle ABD is an isosceles right triangle with interior angles of 45-45-90, which means that angle BAC is equal to 45° and $x = 45$. Triangle EFG is isosceles, which means that triangle EFG is the combining of two right triangles, each with a hypotenuse of 12 and one leg equal to 6. So, triangle EFH is a 30-60-90 triangle, and the leg opposite the 30° angle is equal to one half the hypotenuse, which means that angle FEH is 30° and $y = 30$. The correct answer is (A).

12. **B**

If $y = 4.2$, then the line includes points $(2, 3)$, $(x, 4.2)$, and the origin $(0, 0)$. The slope of the line is equal to $\frac{y_2 - y_1}{x_2 - x_1}$. Using points $(0, 0)$ and $(2, 3)$, the slope equals $\frac{3 - 0}{2 - 0} = \frac{3}{2}$, which means that using points $(0, 0)$ and $(x, 4.2)$, the slope needs to be $\frac{3}{2}$. So, $\frac{4.2 - 0}{x - 0} = \frac{4.2}{x} = \frac{3}{2}$. So $x = \frac{4.2 \times 2}{3} = 2.8$. The correct answer is (B).

13. **A**

The question asks for the area of triangle ABD , which is a right triangle with a hypotenuse of 5 and a leg of 3 and an unknown leg x . Using the Pythagorean Theorem, $3^2 + x^2 = 5^2$, and $x^2 = 25 - 9 = 16$, which means that $x = 4$. Triangle ABD is a familiar 3-4-5 right triangle, and the area equals $\frac{3 \times 4}{2} = 6$. The correct answer is (A).

14. **B**

Angle $AOB = \text{angle } BOC$, which means that the area of sector AOB is equal to the area of sector BOC . The area of triangle AOB is less than the area of sector AOB , which means that the area of triangle AOB is less than the area of sector BOC . The correct answer is (B).

15. **C**

The interior angles of a parallelogram add up to 360° , and two adjacent angles of a parallelogram add up to 180° .

Angle $OLM = 108^\circ$, which means that angle $AOB = 180^\circ - 108^\circ = 72^\circ$. The ratio of a central angle to 360° is equal to the ratio of the arc defined by the central angle to the circumference, which is 15π . So, $\frac{72^\circ}{360^\circ} = \frac{\text{minor arc } AB}{15\pi}$, which means that minor arc $AB = \frac{72^\circ \times 15\pi}{360^\circ} = 3\pi$. The correct answer is (C).

CHAPTER 14: MATH ET CETERA

Et Cetera Drill

1. **C**

The question states that there is a total of 15 marbles and that the number of red marbles r is one more than the number of blue marbles b . Use $r + b = 15$ and $r = b + 1$ to find that there are 8 red marbles and 7 blue marbles in the bowl. The question asks for the probability of randomly selecting a blue marble. Using $\frac{\text{number of blue marbles}}{\text{total number of marbles}}$, the probability of randomly selecting a blue marble is $\frac{7}{15}$. The correct answer is (C).

2. **D**

Plug In the value of x in the expression into the corresponding value of x in the definition of the function $\mathbb{Y}(x)$. Use $\mathbb{Y}(x) = 10x - 1$ to find that $\mathbb{Y}(5) = 10 \times 5 - 1 = 49$, and that $\mathbb{Y}(3) = 10 \times 3 - 1 = 29$. So, $\mathbb{Y}(5) - \mathbb{Y}(3) = 49 - 29 = 20$. The correct answer is (D).

3. **B**

Plug In the value of x for each of the quantities using the definition of the function $\#x$. Use $\#x = 2^{-x}$ to find that $\#8$

$= 2^{-8} = \frac{1}{2^8} = \frac{1}{256}$, and that #4 = $2^{-4} = \frac{1}{2^4} = \frac{1}{16}$. So, Quantity A is $\frac{1}{256}$ and Quantity B is $\frac{1}{16}$. Quantity B is greater than Quantity A. The correct answer is (B).

4. **20**

The question asks, out of 5 finalists, how many ways two of them could be awarded “Best in Show” and “Honorable Mention.” Order matters, which means this is a permutation question. There are five finalists who can be awarded “Best in Show,” which means there are four remaining finalists who can be awarded “Honorable Mention.” So, $5 \times 4 = 20$. The correct answer is 20.

5. **A**

The question states that, out of a total advertising budget of \$90,000, \$40,000 is budgeted for product A, \$30,000 is budgeted for product B, and \$15,000 is budgeted for products A and B combined. Use the group equation Group 1 + Group 2 – Both + Neither = Total to find that $\$40,000 + \$30,000 - \$15,000 + \text{Neither} = \$90,000$. So, Neither is equal to $\$90,000 - \$55,000 = \$35,000$, which means the amount of advertising spent on products other than product A and product B is \$35,000. Quantity A is \$35,000 and Quantity B is \$20,000. Quantity A is greater than Quantity B. The correct answer is (A).

6. **B**

List the two-digit primes less than 50. They are 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, and 47. There are 11 total two-digit

primes less than 50. Because the question asks for probability, the number 11 is the denominator of the probability fraction. Because 11 is a prime number, it cannot be reduced. Therefore, eliminate (A), (C), and (D) because they do not have 11 in the denominator of the fraction. The question asks for the probability that, out of those primes, the tens digit is greater than the units digit. The two-digit primes less than 50 where the tens digit is greater than the units digit are 31, 41, and 43. Use probability = $\frac{\text{want}}{\text{total}}$ to find that the probability that the tens digit is greater than the units digit is $\frac{3}{11}$. The correct answer is (B).

7. **A**

The question asks for the minimum number of staff members needed so that there are at least 20 different groups of five that could be taken to the location. The answers are all integers, so Plug In the Answers beginning with the least number, in this case 7. If there are 7 staff members, then there are $7 \times 6 \times 5 \times 4 \times 3$ different ways five members could be selected. Order doesn't matter, so

divide by the number of ways five members could be arranged, or $5 \times 4 \times 3 \times 2 \times 1$. So, $\frac{7 \times 6 \times 5 \times 4 \times 3}{5 \times 4 \times 3 \times 2 \times 1} = 21$ different groups of five members. Because all of the remaining answer choices are greater than 7, none of them can be the minimum number of staff members. The correct answer is (A).

8. **E**

There are variables in the question and in the answer choices, so Plug In. Try $x = 2$ and $y = 3$. Use $x \# y = x(x - y)$ to find that $2 \# (2 \# 3)$ is equal to $2 \# (2 \times (2 - 3)) = 2 \# -2$. Use the definition of the function again to find that $2 \# -2 = 2 \times (2 - (-2)) = 8$, which is the target answer. Plug In $x = 2$ and $y = 3$ in the answer choices. Choice (A) is $2^2 - 2 \times 3 = -2$. Eliminate (A). Choice (B) is $2^2 - 2 \times 2 \times 3 = -8$. Eliminate (B). Choice (C) is $2^3 - 2^2 - 2 \times 3 = -2$. Eliminate (C). Choice (D) is $2^3 - (2 \times 3)^2 = 8 - 36 = -28$. Eliminate (D). Choice (E) is $2^2 - 2^3 + 2^2 \times 3 = 4 - 8 + 12 = 8$, which matches the target answer. The correct answer is (E).

9. **B**

The question states that there are a total of 12 marbles, and that the number of yellow marbles, y , is twice the number of green marbles, g . Use $y + g = 12$ and $y = 2g$ to find that there are 8 yellow marbles and 4 green marbles

in the jar. The question asks what the probability of one marble being yellow and one being green would be if two marbles are randomly selected from the jar. There are two ways one yellow marble and one green marble can be selected. Either yellow first and then green, or green first and then yellow. The probability of selecting a yellow marble first and a green marble second is

$$\frac{8}{12} \times \frac{4}{11} = \frac{32}{132} = \frac{8}{33}$$
. The probability of selecting a green

marble first and a yellow marble second is

$$\frac{4}{12} \times \frac{8}{11} = \frac{32}{132} = \frac{8}{33}$$
. Add the two probabilities together to
get $\frac{8}{33} + \frac{8}{33} = \frac{16}{33}$. The correct answer is (B).

10. **B**

The question states that there are 10 points on a plane, and that no three points are collinear, which means that any three points can form a triangle, and any four points can form a quadrilateral. The number of distinct triangles that can be formed is equal to the number of distinct combinations of three points that can be selected from a group of 10 points. There are $10 \times 9 \times 8$ ways three points can be selected from a group of 10. Order doesn't matter,

so divide by the number of ways three points can be arranged, or $3 \times 2 \times 1$. So, $\frac{10 \times 9 \times 8}{3 \times 2 \times 1} = 120$, which means that there are 120 distinct triangles that can be created.

The number of distinct quadrilaterals that can be formed is equal to the number of distinct combinations of four points that can be selected from a group of 10 points. There are $10 \times 9 \times 8 \times 7$ ways four points can be selected from a group of 10. Order doesn't matter, so divide by the number of ways four points can be arranged, or $4 \times 3 \times 2 \times 1$. So, $\frac{10 \times 9 \times 8 \times 7}{4 \times 3 \times 2 \times 1} = 210$, which means that there are 210 distinct quadrilaterals that can be created. Quantity A is 120 and Quantity B is 210. Quantity B is greater than Quantity A. The correct answer is (B).

Comprehensive Math Drill

1. **B**

The question states that the radius of the circle with center C is 5, which means that $AC = 5$. A line tangent to a circle is perpendicular to the radius of the circle, which means that AC and AB are perpendicular, and that triangle ABC is a right triangle with hypotenuse $BC = \frac{10\sqrt{3}}{3}$. Use

the Pythagorean Theorem to find that

$$5^2 + (AB)^2 = \left(\frac{10\sqrt{3}}{3}\right)^2, \text{ which means that}$$

$$(AB)^2 = \frac{100 \times 3}{9} - 25 = \frac{100 - 75}{3} = \frac{25}{3}, \text{ and that } AB =$$

$$\frac{5}{\sqrt{3}} = \frac{5\sqrt{3}}{3}. \text{ Another approach is to recognize that triangle}$$

ABC is a familiar 30-60-90 triangle with sides in the ratio of $s : s\sqrt{3} : 2s$. The shorter leg is opposite the 30° angle

and is one-half times the hypotenuse. So, AB

$$= \frac{1}{2} \times \frac{10\sqrt{3}}{3} = \frac{5\sqrt{3}}{3}, \text{ and the longer leg } AC = \frac{5\sqrt{3} \times \sqrt{3}}{3} = 5,$$

which is opposite the 60° angle. Quantity B is greater than
Quantity A. The correct answer is (B).

2. **C**

There are variables in the question, so Plug In. Try $x = 10$.

Quantity A is $\frac{10}{10} = 1$, and Quantity B is $\frac{5}{2} = \frac{2}{2} = 1$. The two quantities are equal, so eliminate (A) and (B). Try $x = 50$.

Quantity A is $\frac{50}{10} = 5$, and Quantity B is $\frac{5}{2} = \frac{10}{2} = 5$. The quantities are equal again. The correct answer is (C).

3. **C**

The standard deviation of a set of numbers is based on the distance of each number in the set from the mean. The mean of the set {1,3,5} is 3, and the distance from the mean of each number in the set is 2, 0, and 2, respectively. The mean of the set {8,10,12} is 10, and the distance from the mean of each number in the set is 2, 0, and 2, respectively. The distances from the means are the same, which means that Quantity A is equal to Quantity B. The correct answer is (C).

4. **A**

The slope-intercept form of a linear equation is $y = mx + b$, where m is the slope and b is the y -intercept, which is the point where x is equal to zero and the line crosses the y -axis. The question states that $y = -\frac{5}{6}x + 1$, which means that the line crosses the y -axis at $y = 1$, and that point P is $(0, 1)$. Point O is $(0, 0)$, which means that OP is equal to the distance from $(0, 0)$ to $(0, 1)$, which is equal to 1. Point Q is the point where the line crosses the x -axis, which is the point where y is equal to zero. Use $y = -\frac{5}{6}x + 1$ and set $y = 0$ to find that $0 = -\frac{5}{6}x + 1$, which means that $-\frac{5}{6}x = -1$ and $x = \frac{6}{5}$. So, point Q is $\left(\frac{6}{5}, 0\right)$. OQ is equal to the distance from $(0, 0)$ to $\left(\frac{6}{5}, 0\right)$, which is equal to $\frac{6}{5}$. Quantity A is $OQ = \frac{6}{5}$, which is greater than Quantity B, which is $OP = 1$. The

correct answer is (A).

5. B

The question states that there are 20 judges. Quantity A is the number of distinct pairs of judges, which means that order does not matter. Therefore, Quantity A is a combination. Use $\frac{\text{number judges for each of 2 slots}}{\text{factorial of the number of slots}}$ to find that the number of distinct pairs of judges is equal to $\frac{20 \times 19}{2 \times 1} = 190$. The question states that there are 10 dogs. Quantity B is the number of possible rankings of dogs from first to third place, which means that order matters and that Quantity B is a permutation. So, the number of possible rankings of dogs from first to third place is $10 \times 9 \times 8 = 720$. Quantity A is 190 and Quantity B is 720. Quantity B is greater than Quantity A. The correct answer is (B).

6. D

There are variables in Quantity A and in Quantity B, so Plug In. The question states that $k > 0$ and $l > 1$. Try $k = \frac{1}{2}$

and $l = 2$. Quantity A is $\frac{1}{\frac{1}{1} + \frac{1}{2}} = \frac{1}{\frac{5}{2}} = \frac{2}{5}$, and Quantity B is $\frac{\frac{1}{2} \times 2}{\frac{1}{1} + \frac{1}{2}} = \frac{\frac{2}{2}}{\frac{5}{2}} = \frac{2}{5}$.

Quantity A is equal to Quantity B, so eliminate (A) and (B). Try $k = 1$ and $l = 2$. Quantity A is

$\frac{1}{\frac{1}{1} + \frac{1}{2}} = \frac{1}{\frac{3}{2}} = \frac{2}{3}$, and Quantity B is $\frac{1 \times 2}{\frac{1}{1} + \frac{1}{2}} = \frac{\frac{2}{2}}{\frac{3}{2}} = \frac{2}{3}$. Quantity A is

less than Quantity B, so eliminate (C). The correct answer is (D).

7. **A**

The factors of 78 are 1, 2, 3, 6, 13, 26, and 39. Of these, 39 is the greatest odd factor, and 13 is the greatest prime factor. Quantity A is greater than Quantity B. The correct answer is (A).

8. **4**

The question states that Joe has \$200 and spends \$150 for a DVD player, which means that Joe has \$50 to spend on DVDs. DVDs cost \$12 each, so divide \$50 by \$12 to get $4 \frac{1}{6}$, which means that Joe can purchase 4 DVDs. The correct answer is 4.

9. **A**

The area of a triangle is equal to $\frac{b \times h}{2}$, where b is the base

and h is the height. The question asks for the area of triangle ABC . AC is the base b , which is equal to the distance from $(0, 3)$ to $(0, 4)$, or 1. The height h is equal to the distance from the top of the triangle on a line perpendicular to a line equal to the base of the triangle.

Therefore, h is equal to the distance from point B , which is $(0, 4)$, to $(0, 0)$. So, $h = 4$ and $b = 1$, which means that the area of triangle $ABC = \frac{1 \times 4}{2} = 2$. The correct answer is (A).

10. A

Factor $10(9^6)$ into its prime factors to find that $10(9^6) = 2 \times 5 \times (3^2)^6 = 2 \times 5 \times 3^{12}$. This means that any factor of $10(9^6)$ has no more than one factor of 2, one factor of 5, and twelve factors of 3, and has no other prime factors. Factor each of the answer choices into prime factors.

Choice (A) is 90, which is equal to $2 \times 5 \times 3^2$, or one factor of 2, one factor of 5, and two factors of 3. Keep (A). Choice (B) is 100, which is equal to $2^2 \times 5^2$, or two factors of 2 and two factors of 5. Eliminate (B). Choice (C) is 330, which is equal to $2 \times 5 \times 3 \times 11$. There are no factors of 11 in $10(9^6)$. Eliminate (C). Choice (D) is 540, which is equal to $2^2 \times 5 \times 3^3$, or two factors of 2, one factor of 5, and three factors of 3. Eliminate (D). Choice (E) is 720, which is equal to $2^4 \times 5 \times 3^2$, or four factors of 2, one factor of 5, and two factors of 3. Eliminate (E). The correct answer is (A).

11. **B and C**

The question states that Roberta drove 50 miles in 2 hours, which is equivalent to $\frac{50}{2} = 25$ miles per hour. The question asks which proportions are equivalent to 25. Evaluate each of the answer choices. Choice (A) is equivalent to $\frac{5}{20} = \frac{1}{4}$. Eliminate (A). Choice (B) is equivalent to $\frac{100}{4} = 25$. Keep (B). Choice (C) is equivalent to $\frac{400}{16} = 25$. Keep (C). Choice (D) is equivalent to $\frac{20}{500} = \frac{1}{25}$. Eliminate (D). Choice (E) is equivalent to $\frac{520}{20} = 26$. Eliminate (E). The correct answers are (B) and (C).

12. **C**

Use the chart to find that the temperature highs for each city for Year Y is shown by the dashed line, and the temperature highs for each city for Year X is shown by the solid line. The question asks how many of the cities shown had a highest temperature in Year Y that was greater than or equal to the highest temperature in Year X. The dashed line is higher than or equal to the solid line for Baltimore, Detroit, Las Vegas, Minneapolis, New York, Phoenix, and San Francisco, or 7 cities. The correct answer is (C).

13. **C**

Use the chart to find that the average temperature for years X and Y for each city are shown by the heavy bars. The question asks for the approximate percent increase from the lowest average temperature for Years X and Y to the highest average temperature for Years X and Y . The lowest average temperature for Years X and Y is 34° in Anchorage, Alaska, and the highest average temperature for Years X and Y is 83° in Las Vegas, Nevada. Use the percentage change formula, which is $\frac{difference}{original} \times 100$, to find that the percent increase is $\frac{83^{\circ} - 34^{\circ}}{34^{\circ}} \times 100 \approx 144\% \approx 140\%$.

The correct answer is (C).

14. C

Use the chart to find that the temperature highs for each city for Year Y is shown by the dashed line and the temperature highs for each city for Year X is shown by the solid line. The heavy bars are the average temperatures for Years X and Y , which are equal to the average high temperatures for Years X and Y plus the average low temperatures for Years X and Y , divided by 2. For Baltimore, the average high temperature for Years X and Y

is $\frac{103^\circ + 97^\circ}{2} = 100^\circ$, and the average temperature for Years X and Y is 60° . So, $60^\circ = \frac{100^\circ + \text{average low temperature}}{2}$, which means that the average low temperature for Baltimore is equal to $60^\circ \times 2 - 100^\circ = 20^\circ$. The correct answer is (C).

15. **A, B, and C**

Simplify the inequality. Subtract 2 from both sides to get $|2x - 3| > 5$. The question asks for values that satisfy the inequality, and the answer choices are integers, so Plug In the Answers. Plug In (A) to find that $|(2x - 4) - 3| = 11$. Keep (A). Plug In (B), which yields $|(2x - 3) - 3| = 9$. Keep (B). Plug In (C), which is $|(2x - 2) - 3| = 7$. Keep (C). Plug In (D) to find that $|(2x - 1) - 3| = 5$. Eliminate (D). Plug In (E), which yields $|(2 \times 0) - 3| = 3$. Eliminate (E). Plug In (F) to show that $|(2 \times 1) - 3| = 1$. Eliminate (F). Plug In (G) to find $|(2 \times 2) - 3| = 1$. Eliminate (G). Plug In (H), which yields $|(2 \times 3) - 3| = 3$. Eliminate (H). The answer is (A), (B), and (C).

16. **A**

The question asks for values of x that satisfy the inequality $x + y + z < z$, where x , y , and z are consecutive odd integers and $x < y < z$. Simplify the inequality $x + y + z < z$. Subtract z from both sides to get $x + y < 0$, which means that $x + y$ is negative. There are variables in the answer choices, so Plug In the Answers. Plug In (A) to find that $x = -3$ and $y = -1$, and that $-3 + -1 = -4$. Keep (A). Plug In (B) to find that $x = -1$ and $y = 1$, and that $-1 + 1 = 0$. Eliminate (B). Choice (C) is 0, and the question states that

x is an odd integer. Eliminate (C). Plug In (D) to find that $x = 1$ and $y = 3$, and that $1 + 3 = 4$. Eliminate (D). Plug In (E) to find that $x = 3$ and $y = 5$, and that $3 + 5 = 8$. Eliminate (E). The correct answer is (A).

17. **E**

The question states that $4^x = 1,024$, which means that $x = 5$, and that $(4^{x+1})(5^{x-1}) = 4^6 \times 5^4$. The answer choices are in terms of 4^n , 5^n , and 10^n . Recognize that

$$4^6 \times 5^4 = (4^4 \times 4^2) \times 5^4 = (4^4 \times 2^4) \times 5^4 = 4^4 \times 10^4.$$

The correct answer is (E).

18. **D**

Use the volume of a rectangular solid, $V = l \times w \times h$, to find that $780 = 12 \times w \times 5$, and that $w = \frac{780}{12 \times 5} = 13$. So, the dimensions of the rectangular solid are 12, 5, and 13. The greatest distance between vertices in a rectangular solid is the distance between opposite corners. Use the formula for the diagonal of a rectangular solid $l^2 + w^2 + h^2 = d^2$ to find that $12^2 + 5^2 + 13^2 = 144 + 25 + 169 = 338 = d^2$, which means that $d = \sqrt{338} = \sqrt{169 \times 2} = 13\sqrt{2}$. The correct answer is (D).

19. **D**

The question asks how many arrangements are possible for a group of three boys and three girls to sit on a park bench, where no boy can sit on either end of the bench. Order matters, so this is a permutation question. There are

six slots, and the end slots can only be filled by girls, which means that in the first slot there are three choices, and in the last slot there are two choices. So, fill in the remaining slots to get $3 \times 4 \times 3 \times 2 \times 1 \times 2 = 144$. The correct answer is (D).

20. C

Use the Average Pie to find that the number of items 3 times the average 16 is equal to the total 48, which means that $48 = 24 + p + q$, and that $p + q = 48 - 24 = 24$. So, $16(p + q) = 16 \times 24 = 384$. The correct answer is (C).

Part VI

Practice Tests

[18 Practice Test 1](#)

[19 Practice Test 1: Answers and Explanations](#)

[20 Practice Test 2](#)

[21 Practice Test 2: Answers and Explanations](#)

TEST INSTRUCTIONS

It's important to become familiar with the instructions for the test now, so that you don't waste time figuring them out on test day.

General Instructions

Each exam consists of six sections—two Analytical Writing sections, two Verbal Reasoning sections, and two Quantitative Reasoning sections. The Analytical Writing sections will always be first. The Verbal and Quantitative Reasoning sections may appear in any order. You will have 30 minutes for each Analytic Writing section, 30 minutes for each Verbal, and 35 minutes for each Quantitative Reasoning section. If desired, you may take a 10-minute break after Section 4. Remember that during the actual test, there may be an additional verbal or quantitative experimental section.

Section 1	30 minutes	Analytical Writing
Section 2	30 minutes	Analytical Writing
Section 3	30/35 minutes	Verbal or Quantitative Reasoning
Section 4	30/35 minutes	Verbal or Quantitative Reasoning
Section 5	30/35 minutes	Verbal or Quantitative Reasoning
Section 6	30/35 minutes	Verbal or Quantitative Reasoning



Need More Practice?

The Princeton Review's *1,027 GRE Practice Questions* offers drills for every question type, along with detailed, comprehensive explanations.

When taking a Verbal or Quantitative Reasoning section, you are free to skip questions that you might have difficulty answering and come back to them later during the time allotted for that section. You may also change your response to any question in a section during the time allotted to work on that section. You may not go back to an earlier section of the test after time for that section runs out.

Analytical Writing Instructions

Issue Topic

You will be given a brief statement on an issue of general interest and specific instructions on how to respond to that issue. You will have 30 minutes to plan and write a response in which you develop a position on the issue. Make sure that you respond to the specific instructions and support your position on the issue with reasons and examples drawn from such areas as your reading, experience, observations, and/or academic studies.

Before you begin writing, you may want to think for a few minutes about the passage and the instructions and then outline your response. Be sure to develop your analysis fully and organize it coherently. Leave a minute or two at the end to reread what you have written and make any revisions you think are necessary.

Argument Topic

You will be given a short passage that presents an argument, or an argument to be completed, and specific instructions on how to respond to that passage. You will have 30 minutes to plan and write a response in which you analyze the passage. Note that you are NOT being asked to present your own views on the subject. Make sure that you respond to the specific instructions and support your analysis with relevant reasons and/or examples.

Before you begin writing, you may want to think for a few minutes about the passage and the instructions and then outline your

response. Be sure to develop your analysis fully and organize it coherently. Leave a minute or two at the end to reread what you have written and make any revisions you think are necessary.

Verbal Reasoning Instructions

Each Verbal Reasoning section is 30 minutes long and has 20 questions. For some questions, you will be instructed to choose one or more answer choices. The instructions may or may not specify the number of answers you must choose. If the number of answers is specified, you must choose all of the correct answers in order to have your response counted as correct. If the number is not specified, choose all that correctly answer the question. No credit will be given if fewer or more than all of the correct answers are chosen.

Quantitative Reasoning Instructions

Each Quantitative Reasoning section is 35 minutes long and has 20 questions. You will be provided with a five-function calculator—one with addition, subtraction, multiplication, division, and square-root features—during Quantitative Reasoning sections.

For some questions, you will be instructed to choose one or more answer choices. The instructions may or may not specify the number of answers you must choose. If the number of answers is specified, you must choose all of the correct answers in order to have your response counted as correct. If the number is not specified, choose all that correctly answer the question. No credit will be given if fewer or more than all of the correct answers are chosen.

Some questions will require you to enter your own answer. If the question provides a single response space, enter a single number. You may enter negative signs and decimal points. If the question tells you to round your answer, do so. Otherwise, enter the entire answer. If the question provides two response spaces, you must enter your answer in the form of a fraction. You are not required to

enter fractions in their most reduced form. If you are aware of more than one correct response, you should enter only one of them.

Some questions will ask you to fill blanks in the text by clicking to select from a list of choices. Sometimes all of the choices will be used, and sometimes only some of the choices will be used. The correct answer always requires you to put a different choice in every blank.

Note on Numbers and Figures

Numbers: All numbers used are real numbers.

Figures: The position of points, angles, regions, and so on can be assumed to be in the order shown, and angle measures can be assumed to be positive. Lines shown as straight can be assumed to be straight. Figures can be assumed to lie in a plane unless otherwise indicated. Any other figures are not necessarily drawn to scale, unless a note states that a figure is drawn to scale.

Chapter 18

Practice Test 1

[*Click here*](#) to download a PDF of Practice Test 1.

SECTION 1: ISSUE TOPIC

Directions:

You will be given a brief quotation that states or implies an issue of general interest and specific instructions on how to respond to that issue. You will have 30 minutes to plan and compose a response in which you develop a position on the issue according to the specific instructions. A response to any other issue will receive a score of zero.

“Governments are justified in circumventing civil laws when doing so is vital to the protection of national security.”

Write an essay in which you take a position on the statement above. In developing and supporting your position, you should consider ways in which the statement might or might not hold true.

SECTION 2: ARGUMENT TOPIC

Directions:

You will be given a short passage that presents an argument, or an argument to be completed, and specific instructions on how to respond to that passage. You will have 30 minutes to plan and compose a response in which you analyze the passage according to the specific instructions. A response to any other argument will receive a score of zero.

Note that you are NOT being asked to present your own views on the subject. Make sure that you respond to the specific instructions and support your analysis with relevant reasons and/or examples.

The following is from a recent email from the Diord Corp. Human Resources Manager: “Tobor Technologies found that mental health problems and mental illness were responsible for about 15 percent of employee sick days. Tobor amended its employee insurance plan so that workers receive the same coverage for mental illness as they do for physical illness. In addition, the company hired an on-site psychologist and created a system that allows workers to schedule confidential counseling appointments. After one year, the number of sick days used by employees declined by 10 percent. Diord Corp. has had an increase in employee sick days over the past two years, so we should introduce a similar insurance plan and counseling program. These measures will surely reduce employee absenteeism and cause an increase in productivity.”

Write a response in which you examine the argument’s unstated assumptions, making sure to explain how the

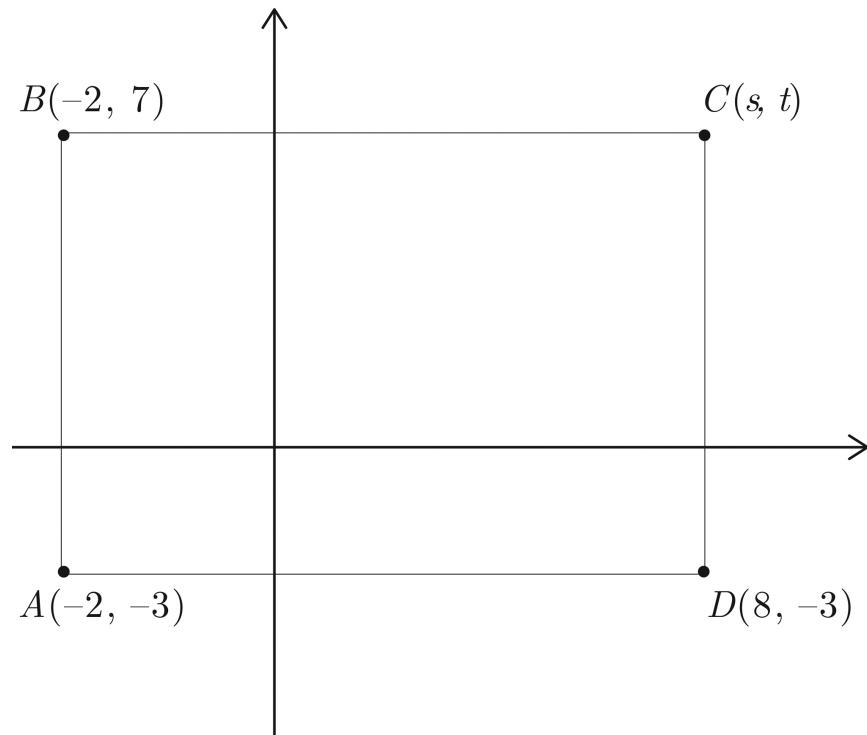
argument depends on the assumptions and what the implications are if the assumptions prove unwarranted.

SECTION 3: QUANTITATIVE REASONING

For each of Questions 1 to 7, compare Quantity A and Quantity B, using additional information centered above the two quantities if such information is given. Select one of the four answer choices below each question and fill in the circle to the left of that answer choice.

- (A) *Quantity A is greater.*
- (B) *Quantity B is greater.*
- (C) *The two quantities are equal.*
- (D) *The relationship cannot be determined from the information given.*

A symbol that appears more than once in a question has the same meaning throughout the question.



AB is parallel to CD .

BC is parallel to AD .

Quantity A

s

Quantity B

t

- Quantity A is greater.
- Quantity B is greater.
- The two quantities are equal.
- The relationship cannot be determined from the information given.

2 of 20

A certain punch is created by mixing two parts soda and three parts ice cream. The soda is 4 parts sugar, 5 parts citric acid, and 11 parts other ingredients. The ice cream is 3 parts sugar, 2 parts citric acid, and 15 parts other ingredients.

Quantity A

Parts sugar in the punch

Quantity B

Parts citric acid in the punch

- Quantity A is greater.
- Quantity B is greater.
- The two quantities are equal.
- The relationship cannot be determined from the information given.

3 of 20

The average (arithmetic mean) high temperature for x days is 70 degrees. The addition of one day with a high temperature of 75 degrees increases the average to 71 degrees.

Quantity A

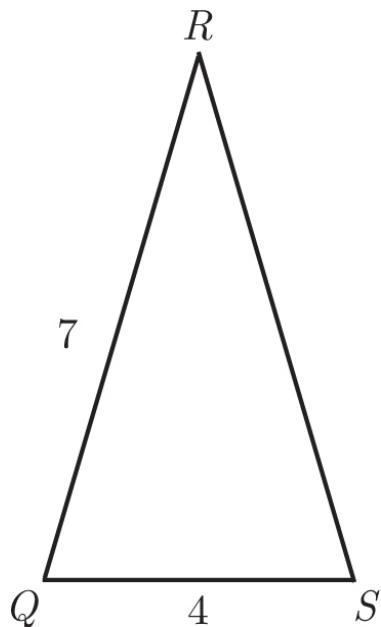
x

Quantity B

5

- Quantity A is greater.
- Quantity B is greater.
- The two quantities are equal.
- The relationship cannot be determined from the information given.

4 of 20



Each angle in ΔQRS has a degree measurement of either x or y and $2x + y = 180$.

Quantity A

Perimeter of QRS

Quantity B

17

- Quantity A is greater.
- Quantity B is greater.
- The two quantities are equal.
- The relationship cannot be determined from the information given.

5 of 20

Set A consists of the elements $\{1, 3, 5, 7\}$. If Set B consists of the elements $\{12, 14, 16, x\}$, and the standard deviation of Set B is higher than that of Set A, then which of the following is a possible value of x ?

Indicate all such values.

15

16

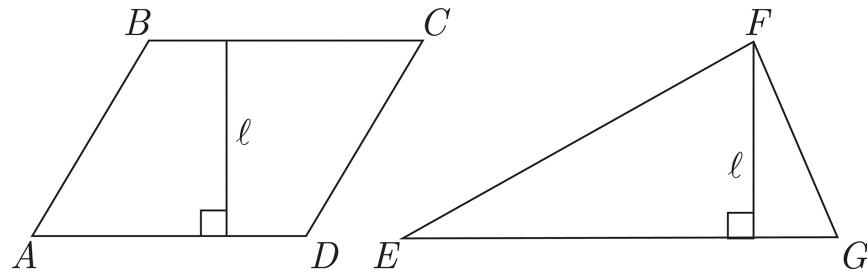
17

18

19

20

6 of 20



AB is parallel to CD .

AD is parallel to BC .

$$2AD = EG$$

Quantity A

The area of $ABCD$

Quantity B

The area of EFG

- Quantity A is greater.
- Quantity B is greater.
- The two quantities are equal.
- The relationship cannot be determined from the information given.

7 of 20

$$(3x - 4y)(3x + 4y) = 2$$

Quantity A

Quantity B

$$9x^2 - 16y^2$$

4

- Quantity A is greater.
- Quantity B is greater.
- The two quantities are equal.
- The relationship cannot be determined from the information given.

8 of 20

If $8a - 2 = 22$, then $4a - 1 =$

- 2
- $\frac{11}{4}$
- 11
- 12
- 44

9 of 20

Twenty percent of the sweaters in a store are white. Of the remaining sweaters, 40 percent are brown, and the rest are blue. If there are 200 sweaters in the store, then how many more blue sweaters than white sweaters are in the store?

10 of 20

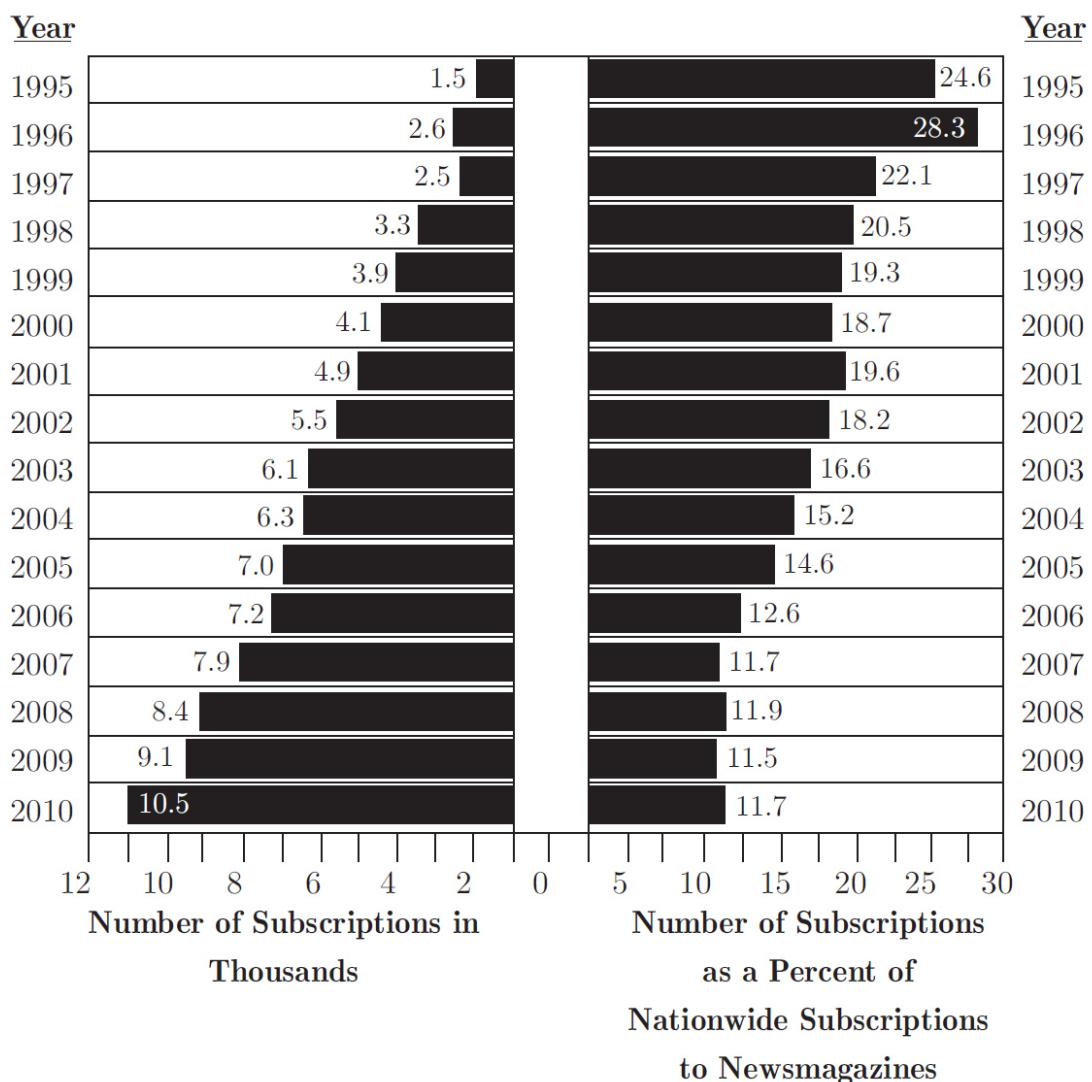
$$\frac{4^{13} - 4^{12}}{4^{11}} =$$

- 0
- 1
- 4
- 12

16

Questions 11 through 14 refer to the following graph.

SUBSCRIPTIONS TO NEWSMAGAZINE *x*, 1995–2010



NATIONWIDE NEWSMAGAZINE SUBSCRIPTIONS: 1997 TO 2009

Newsmagazine	1997	2000	2003	2006	2009
<i>x</i>	2,500	4,100	6,100	7,200	9,100
<i>y</i>	1,700	3,100	4,600	5,700	7,200
<i>z</i>	3,600	5,800	7,600	9,400	11,400
Others	3,500	8,900	18,500	34,700	51,300

What was the total number of subscriptions for Newsmagazine x during the year in which Newsmagazine x accounted for 14.6 percent of nationwide news magazine subscriptions?

- 1,020
- 1,980
- 6,300
- 7,000
- 7,200

12 of 20

In which of the following years did subscriptions to

Newsmagazine z account for approximately $\frac{1}{6}$ of the total

nationwide magazine subscriptions?

- 2009
- 2006
- 2003
- 2000
- 1997

13 of 20

What was the approximate percent increase in nationwide subscriptions to newsmagazines between 1995 and 1996 ?

- 4%
- 11%
- 26%
- 51%
- 73%

14 of 20

In 1998, what was the approximate number of subscriptions to newsmagazines nationwide?

- 3,000
- 13,000
- 16,000
- 20,000
- 67,000

15 of 20

If $a = (27)(3^{-2})$ and $x = (6)(3^{-1})$, then which of the following is equivalent to $(12)(3^{-x}) \times (15)(2^{-a})$?

- $5(-2245)(320)$
- $\frac{2}{5}$
- $\frac{5}{2}$
- $5(24)(38)$
- $5(2245)(320)$

16 of 20

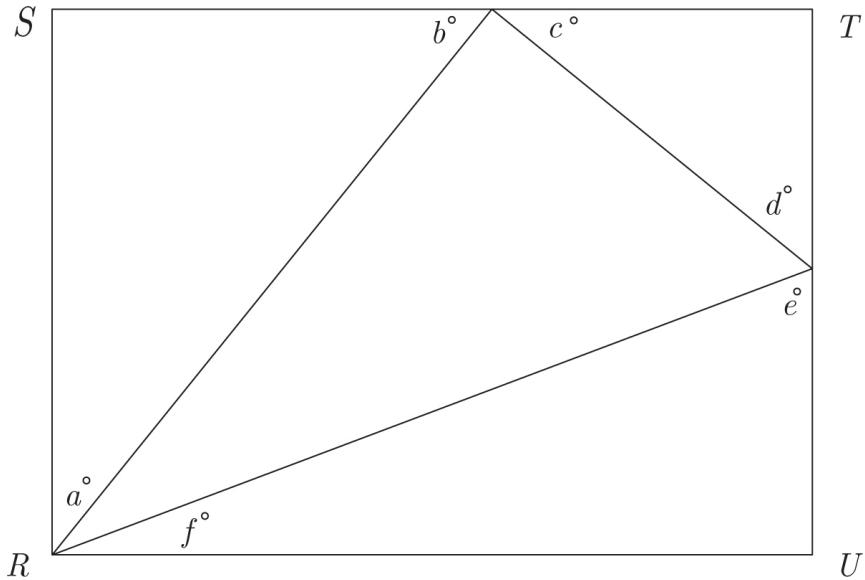
Jill has received 8 of her 12 evaluation scores. So far, Jill's average (arithmetic mean) is 3.75 out of a possible 5. If Jill needs an average of 4.0 points to get a promotion, which list of scores qualifies Jill to receive her promotion?

Indicate all such lists.

- 3.0, 3.5, 4.75, 4.75
- 3.5, 4.75, 4.75, 5.0
- 3.25, 4.5, 4.75, 5.0

3.75, 4.5, 4.75, 5.0

17 of 20



In the figure above, if $RSTU$ is a rectangle, what is the value of $a + b + c + d + e + f$?

18 of 20

If the probability of selecting, without replacement, 2 red marbles from a bag containing only red and blue marbles is $\frac{3}{55}$ and there are 3 red marbles in the bag, what is the total number of marbles in the bag?

10

11

55

110

165

19 of 20

All first-year students at Blue State University must take calculus, English composition, or both. If half of the 2,400 first-year students at Blue State University take calculus and half do not, and one-third of those who take calculus also take English composition, how many students take English composition?

- 400
- 800
- 1,200
- 1,600
- 2,000

20 of 20

If $\frac{13!}{2^x}$ is an integer, which of the following represents all possible values of x ?

- $0 \leq x \leq 10$
- $0 < x < 9$
- $0 \leq x < 10$
- $1 \leq x \leq 10$
- $1 < x < 10$