

2017 – 2018

ACT PRACTICE TEST 7

EXEMPLAR

(ANSWER KEY)



ANSWERS AND EXPLANATIONS

ENGLISH TEST

Passage I

1. C Difficulty: Medium

Category: Usage

Getting to the Answer: Use *who* or *whom* to refer to a person. The underlined word begins a description of Lucia; the correct pronoun is *who*, because Lucia is a person. Choice (C) is correct. *Which*, in A, is incorrect when used to refer to a person. Choice B uses the objective case *whom*; you wouldn't say "*her* was already married," so "*whom* was already married" is incorrect. *She who*, in D, makes the sentence unnecessarily wordy and awkward.

2. J Difficulty: Medium

Category: Sentence Structure and Formation

Getting to the Answer: Independent clauses should either be joined by a semicolon or connected with a coordinating conjunction; otherwise, one of the clauses must be made subordinate. As written, the sentence is a run-on. None of the answer choices offers a semicolon or a comma and a coordinating conjunction, but (J) makes the second clause dependent by using *that*. Choices G and H do not address the run-on error.

3. B Difficulty: Medium

Category: Sentence Structure and Formation

Getting to the Answer: Use context to determine appropriate verb tenses. This sentence uses the simple past tense *were* and doesn't indicate any time shift, so the simple past tense *knew* makes the most sense. Choice (B) is correct. Choice A uses the past participle *known* without the necessary helping verb *had*. Choice C incorrectly uses *had knew*; the past participle of *know* is *known*. Choice D uses *been known* without the necessary helping verb *had*; it also creates a sentence that is grammatically incorrect.

4. J Difficulty: Medium

Category: Organization, Unity, and Cohesion / Transitions

Getting to the Answer: Remember to read for logic, as well as grammar and usage. This sentence inappropriately uses the contrast word *however*. Choice J correctly uses *then*, a transition word indicating time. Choices G and H use cause-and-effect transitions, which are inappropriate in context.

5. C Difficulty: Medium

Category: Usage

Getting to the Answer: When an idiomatic construction begins with *not only*, it must conclude with *but also*. Only (C) correctly completes the idiom. *And*, *A*, *so*, *B*, and *then*, *D*, all fail to correctly complete the idiom.

6. H Difficulty: Medium

Category: Sentence Structure and Formation

Getting to the Answer: The *-ing* form can serve several functions; when used as a verb, it requires a helping verb to be correct. *I being* here is grammatically incorrect; (H) substitutes the correct verb form *was*. Choice G creates a grammatically incorrect sentence, and J omits the verb.

7. B Category: Topic Development / Writer's Purpose

Difficulty: Medium

Getting to the Answer: With Writer's Purpose questions like this one, you need to identify the choice that matches the purpose stated in the question stem. The question asks you to select the sentence that gives the most relevant information about Nicola's travel plans. Only (B) tells you about Nicola's plans; he intends to spend the summer with his family in New York. Choice A mentions Nicola's trip to England, which is out of scope for the passage. Choice C provides general information about the easiest way to travel from Italy to America, but it doesn't

tell you anything about Nicola's specific plans to visit America. Choice D also focuses on the past, explaining why Nicola had not previously come to America; this doesn't match the question stem's call for information about Nicola's travel plans.

8. H **Difficulty:** Medium

Category: Knowledge of Language / Precision

Getting to the Answer: Always read question stems carefully; it's easy to miss an important word like NOT or EXCEPT. The question asks for the word that does NOT show that the cousins looked forward to meeting Nicola. The only negatively charged word here is *apprehensive*, which suggests that the cousins feared Nicola's arrival. Choice (H) is correct. Choices F, G, and J all use positively charged words that indicate the cousins were looking forward to Nicola's visit.

9. C **Difficulty:** Medium

Category: Punctuation

Getting to the Answer: A phrase set off between commas must be nonessential: that is, the sentence must still make sense without it. As written, this sentence treats the phrase "hadn't seen him" as nonessential, but "like me, since they were kids" does not make sense—this phrase must remain in the sentence. Choice (C) eliminates the incorrect comma without introducing any additional errors. Choices B and D create run-on sentences; additionally, D incorrectly inserts a comma between a verb and its object.

10. J **Difficulty:** High

Category: Knowledge of Language / Ambiguity

Getting to the Answer: When a pronoun is underlined, first determine to what or whom it refers. In this case, the reference is unclear. The last plural noun is *musicians*, but that refers to the narrator and Nicola, who do play instruments. Eliminate F. Choice G clearly refers to the narrator and Nicola, so it should also be eliminated. Choice H is ambiguous: to which Americans does the sentence refer? Choice (J) correctly identifies the group mentioned earlier in the paragraph: the narrator's American cousins.

11. C **Difficulty:** Medium

Category: Knowledge of Language / Concision

Getting to the Answer: The shortest answer isn't always correct—D omits a phrase necessary for the sentence to make sense. Choices A and B include information irrelevant to the topic of the writer meeting Nicola. That leaves (C), which eliminates the irrelevant information without losing the logic of the sentence.

12. J **Difficulty:** Medium

Category: Sentence Structure and Formation

Getting to the Answer: As a general rule, descriptive phrases modify the nouns that immediately follow them. As written, this sentence tells us that / was "Taught to him before she passed away in Italy." Choice (J) is the most concise and logical version of this sentence. Choice G incorrectly indicates that the grandmother, not Nicola, taught the songs to the writer. Choice H gives the introductory phrase no logical noun to modify, making its grammatical structure incorrect.

13. C **Difficulty:** Low

Category: Sentence Structure and Formation

Getting to the Answer: A verb is underlined, so start by checking to see if the tense is correct. The simple past tense is used in this paragraph: *shared* and *connected*. The correct tense here is the simple past *threw*, as in (C). Choice A uses the conditional tense "would have thrown," but the sentence describes something the writer's father actually did, not something hypothetical. Choice B uses the future perfect tense, but the sentence describes something that happened in the past, not an upcoming event. Choice D uses the present tense, but the action happened in the past.

14. G **Difficulty:** Low

Category: Punctuation

Getting to the Answer: "Possessive versus plural" questions can often be answered quickly: does the sentence refer to more than one grandmother or something belonging to a grandmother? This sentence is discussing the country that *belongs* to the grandmother,

so an apostrophe is needed to make *grandmother* possessive. Only (G) does this without introducing an additional error. Choice F is missing the necessary apostrophe; *grandmothers* is plural, not possessive. Choice H uses the plural possessive *grandmothers'*, but only one grandmother is discussed in the paragraph. Choice J corrects the punctuation error but substitutes the homophone *are* for the plural possessive pronoun *our*.

15. A **Category:** Topic Development / Writer's Purpose

Difficulty: Medium

Getting to the Answer: When asked about the purpose of the passage as a whole, consider its topic and tone. The narrator describes a personal experience getting to know his cousin from Italy. The tone is positive, emphasizing their similarities and ending with a scene in which family members are touched emotionally by the singing of family folk songs. Thus, the passage accomplishes the stated purpose; eliminate C and D. Choice B is a distortion; the differences between Nicola and the narrator's American cousins are not the reason the essay accomplishes the stated purpose. Thus, (A) is correct.

Passage II

16. G **Difficulty:** Medium

Category: Punctuation

Getting to the Answer: When the only difference in the answer choices is the use of commas, focus on sentence structure. Are there items in a list that need to be separated by commas? A nonessential phrase that needs to be set off from the rest of the sentence with a pair of commas? An introductory phrase or clause that needs to be separated from the rest of the sentence? This sentence treats the phrase *I live* as nonessential, but removing it creates a sentence fragment. Choice (G) properly places a comma between the introductory phrase describing the location of the Handsome Bean coffee shop and the sentence's independent clause. Choice H creates an introductory clause with no noun to modify, which is grammatically incorrect. Choice J fails to set off the introductory phrase from the body of the sentence, making the sentence difficult to understand.

17. A **Difficulty:** Medium

Category: Topic Development / Writer's Purpose

Getting to the Answer: When you're asked the purpose of including a detail, read around that detail for context. By describing the proximity of the Little League field, the writer provides a context for the teams the Handsome Bean often sponsors. Without this information, the following sentence would not fit well in the context. Thus, (A) is correct. There is no change of topic, so B is incorrect. While the information helps the reader picture the scene, C misses the function of introducing the sponsored team in the following sentence. Choice D does not match the tone of the passage, which portrays the Handsome Bean positively.

18. F **Difficulty:** Low

Category: Sentence Structure and Formation

Getting to the Answer: Use context to determine the answers to questions with underlined verbs. The verbs in this paragraph are in the present tense: *come*, *stay*, *is*, and *offers*. The present tense *sponsors* is correct, so no change is needed, (F). Choice G uses the past perfect *had sponsored*, incorrectly suggesting that the coffee shop sponsored the Little League team before another past event. Choices H and J use the past tense, which is inconsistent with the rest of the paragraph.

19. B **Difficulty:** Medium

Category: Topic Development / Supporting Material

Getting to the Answer: Read question stems carefully. Often, all four answer choices to Supporting Material questions will be relevant to the passage, but only one will fulfill the specific requirements of the question. The question asks for additional detail about the customers who come to the coffee shop. Only (B) focuses on customers—the parents and children who come for ice cream after the Little League games. Choice A focuses on an additional discount provided by the coffee shop, not on the customers of the shop. Choice C provides a detail about another sport supported by the coffee shop; this doesn't match the purpose stated in the question stem. Choice D provides more information about the Little League field, not about the coffee shop's customers.

20. G Difficulty: Medium

Category: Sentence Structure and Formation

Getting to the Answer: When the end of one sentence and the beginning of the next are underlined, consider whether one or both are sentence fragments. As written, both of these sentences are fragments, since neither expresses a complete thought. Choice (G) correctly combines the two fragments into a single sentence. Choice H is unnecessarily wordy. Choice J does not address the error.

21. C Difficulty: Medium

Category: Organization, Unity, and Cohesion / Passage Organization

Getting to the Answer: Remember the first step in the Kaplan Method: read the passage and identify the issue. Here, you need to select the sentence that best introduces the topic of the paragraph, so you'll need to read the paragraph. The paragraph describes the antique décor of the coffee shop—its “century-old” counter, the photos from the 1920s and 1930s, and the “original tin ceiling.” Choice (C) effectively leads into this description by explaining that the owner wants the shop to “look like it has been there for decades.” Choice A focuses on the friendship between the writer and Mary; this doesn't connect with the details of the antique counter, old photos, and original tin ceiling. Choice B is too general; (C) provides a more specific reason for the decorating decisions Mary has made. Choice D explains that the space was vacant before the Handsome Bean opened, but this doesn't introduce the description of the décor.

22. H Difficulty: Low

Category: Usage

Getting to the Answer: The object of a preposition must be a noun, pronoun, or gerund (*-ing* verb form functioning as a noun). For this sentence to make sense, the noun *condition* is required as the object of *to*. Since nouns can only be modified by adjectives, (H) is correct. Choices F and G use the adjective *conditional* as the object of the preposition, which is grammatically incorrect. Although *original* can function as a noun, it could not then be modified by an adverb, so J is incorrect.

23. B Difficulty: Medium

Category: Usage

Getting to the Answer: The ACT will often separate a tested verb from its subject with an intervening phrase or clause. Make sure that you've correctly identified the subject with which an underlined verb must agree. As in many sentences on the ACT, a description separates the subject and verb here; the subject of the verb *depicts* is the plural *photos*. The plural form *depict* is needed; (B) is correct. Choices C and D do not address the error; additionally, C introduces an unwarranted verb tense change.

24. F Difficulty: High

Category: Topic Development / Supporting Material

Getting to the Answer: To answer this type of question, focus on the function of the sentence. What purpose does it serve in the paragraph? The sentence provides the reader with the information that the building is at least 70 years old. Therefore, if the sentence were deleted, you would lose information about the age of the building. Choice (F) is correct. Choice G refers to Mary and the writer etching their names in the ceiling, but the sentence does not describe this action. Choice H relates the sentence to the influence of the original owner; however, the time at which Harvey etched his name has little to do with his influence on Mary, the writer, or anyone else. Choice J treats the sentence as a description of the interior of the coffee shop, but no description of the ceiling is given in this sentence.

25. D Difficulty: Medium

Category: Punctuation

Getting to the Answer: A comma should not be inserted between a preposition and its object. This sentence requires no comma; (D) is correct. Choice B uses a semicolon, which is only correct when used to connect two independent clauses. Choice C treats “usually in the form” as a nonessential phrase. However, deleting this phrase does not leave a logical sentence, so C is incorrect.

26. J Difficulty: Medium

Category: Usage

Getting to the Answer: Use *number* for items that are countable and *amount* for quantities that are not. The

talented musicians and poets are countable, so *number* should be used instead of *amount*. Since the number of talented performers isn't compared to anything, *good* is the correct adjective. The answer is (J). Choices F and G use *amount* where *number* would be correct; additionally, Choice G uses the comparative adjective *better*, but nothing is compared here. Choice H also uses *better*, which is correct only in a comparison.

27. C Difficulty: Medium

Category: Knowledge of Language / Concision

Getting to the Answer: Be aware of phrases like "It being that"; they add no real meaning to the sentence and provide no clear antecedent for the pronoun. "It being that" is unnecessary here, but eliminating it creates a run-on sentence. Choice (C) eliminates the unnecessary language and makes the second clause subordinate. Choices B and D both use incorrect grammatical structure.

28. G Difficulty: Medium

Category: Sentence Structure and Formation

Getting to the Answer: Elements in a compound must be parallel in structure. The conjunction "or" creates a compound: students load up on caffeine "so they can cram all night . . . or finishing their research papers." Choice (G) makes the two verbs, *cram* and *finish*, parallel. Choices H and J do not address the parallelism error.

29. D Difficulty: Medium

Category: Sentence Structure and Formation

Getting to the Answer: A sentence may have multiple nouns and verbs and still be a fragment. A complete sentence requires a subject and a verb in an independent clause that expresses a complete thought. The subject here is "a group of high school students," but the clause "who stops by to have an ice cream cone or an egg cream" describes the students without providing a predicate verb. Choice (D) eliminates the pronoun, making *stops* the predicate verb. Choice B does not address the error and incorrectly uses *that* to refer to people. Choice C creates an error in subject-verb agreement.

30. H Difficulty: Medium

Category: Organization, Unity, and Cohesion / Passage Organization

Getting to the Answer: When you need to add or move information, read the new information into the passage at the suggested points to determine its logical placement. The paragraph describes different customers at the coffee shop throughout a typical day, starting in the morning and ending in the evening. This sentence talks about customers who come to the coffee shop in the afternoon, so it should be placed between Sentence 3, which talks about daytime customers, and Sentence 4, which describes customers in the evening. Choice (H) is correct. Choices F and J both place the information about customers in the afternoon after information about customers in the evening. Choice G places the information about afternoon customers before the information about morning customers.

Passage III

31. A Difficulty: Low

Category: Punctuation

Getting to the Answer: Remember your tested comma rules. If a sentence doesn't satisfy a tested condition, the comma will be incorrect. No change is needed here. Choice B treats *naval*, *adventure*, and *exploration* as three items in a list, but *naval* is an adjective, not a noun. Choice C places a comma between the adjective *naval* and *adventure*, the noun it describes. Choice D adds a semicolon, but the second clause is not independent.

32. G Difficulty: Low

Category: Knowledge of Language / Concision

Getting to the Answer: Always read until you have enough information to identify the issue. A problem that isn't apparent in the underlined portion may be clear when you consider the whole sentence. The sentence is grammatically correct, but it uses redundant language: *Finally* and *at last* mean the same thing. Choice (G) is the most concise and is therefore correct. Choice H changes *Finally* to *In the end*, but this doesn't correct the redundancy problem. Choice J makes the redundancy problem worse by using both *Ultimately* and *the result*.

33. C **Difficulty:** Medium

Category: Usage

Getting to the Answer: Every pronoun must have a clear and logical antecedent. Marryat, not his parents, enlisted in the British navy, so the pronoun here should be *he*, not *they*. Both (C) and D correct the pronoun, but D introduces a new error; a comma, not a semicolon, is used with a coordinating conjunction (*and*). Choice B does not address the error.

34. H **Difficulty:** Low

Category: Usage

Getting to the Answer: Remember the difference between *who's* and *whose*. *Who's* always stands for *who is* or *who has*, while *whose* shows possession. The *naval exploits* were Cochrane's, so the pronoun *whose* is correct here, as in (H). Choice F uses *that's*, which is a contraction for *that is*; "that is naval exploits are legendary" doesn't make sense in context. Choice G uses *who's*, a contraction for *who is* or *who has*; "who is (or has) naval exploits are legendary" doesn't make sense. Choice J creates a grammatically incorrect sentence.

35. A **Difficulty:** Medium

Category: Topic Development / Supporting Material

Getting to the Answer: Use your elimination skills here. Once you've answered the question *yes* or *no*, you can immediately eliminate two choices and focus your attention on the remaining two. The question asks you if the phrase "a number of" adds meaning to the sentence, so take a look at the sentence without the phrase. Omitting the phrase leaves you with Cochrane "as the inspiration for Marryat's fictional characters." A reader could easily assume that this means that Cochrane was the inspiration for all of Marryat's characters, which definitely changes the meaning of the sentence. Choice (A) provides the correct answer. Choice B is incorrect because *characters* is plural, which indicates that Cochrane was a model for more than one character. Choices C and D incorrectly state that omitting the phrase would not change the meaning of the sentence.

36. J **Difficulty:** Medium

Category: Topic Development / Supporting Material

Getting to the Answer: When you're asked about adding a new phrase or sentence, consider both relevance and tone. The focus of this essay is Marryat and how his adventures at sea influenced his writing. The description of Cochrane as an inspiration for Marryat is directly related to the essay's focus, but the information that Cochrane inspired another writer is irrelevant. The sentence should not be added because it is not connected to the main idea of the essay, so (J) is correct. Choices F and G would both incorrectly add the sentence to the essay. Choice H is incorrect because even adding an explanation of the relationship between O'Brian and Marryat would not make this detail relevant to the topic of the essay.

37. B **Difficulty:** Medium

Category: Knowledge of Language / Precision

Getting to the Answer: The question asks which choice would NOT be equivalent, so determine which answer choice stands out from the rest. Choices A, C, and D all convey that the authors are widely known. Choice (B) has a different sense. *Beloved* means well loved, which is not the same as being widely known. Thus, (B) is correct.

38. G **Difficulty:** Medium

Category: Sentence Structure and Formation

Getting to the Answer: The question asks you to correctly place the prepositional phrase in the sentence, so start by determining what came "from historical records." The sentence explains that Marryat had vast experiences at sea, while other writers had only "their imaginations and accounts." It makes sense that these accounts came "from historical records," so the placement in (G) is correct. Choice F indicates that the captain himself, not stories about him, came "from historical records." Choice H indicates that the other writers came "from historical records," which doesn't make sense. Choice J indicates that Marryat's memories of adventures came "from historical records"; this contradicts the information in the passage.

39. A **Difficulty:** Medium

Category: Punctuation

Getting to the Answer: Not every underlined portion will contain an error; about 25% of English Test questions will require no change. In this sentence, “captain and literary inspiration” describes Cochrane; (A) correctly sets “Cochrane” off from the rest of the sentence. Choices B and D incorrectly place commas within a compound; commas are used to set off items in a series of three or more. Choice C omits the comma necessary to set off “Cochrane” from the rest of the sentence.

40. F **Difficulty:** Medium

Category: Sentence Structure and Formation

Getting to the Answer: Verb tenses must make sense in the context of the sentence, so consider whether one action logically occurs before another. This sentence tells you about two past events—a midshipman falling overboard and Marryat jumping into the sea to save him. The first event was the midshipman falling, so the past perfect “had fallen” in (F) is correct. Choice G uses the conditional “would have fallen,” but Marryat didn’t prevent the midshipman from falling into the sea; he jumped in after the midshipman. Choice H illogically suggests that the midshipman was still in the process of falling overboard when Marryat jumped in to save him. Choice J incorrectly uses the present tense; all of the actions in this sentence took place in the past.

41. D **Difficulty:** Low

Category: Knowledge of Language / Concision

Getting to the Answer: The passive voice is not always incorrect, but it is generally wordier than the active. If a passive construction can be easily made active, the correct answer choice will do so. Marryat is the one who accomplished the feats, so an active sentence will focus on him, rather than his actions. Choice (D) makes *he* the subject and uses the active verb *accomplished*. Choices A and C make *feats*, not Marryat, the subject, requiring passive and unnecessarily wordy constructions. Choice B is also unnecessarily wordy.

42. G **Difficulty:** Medium

Category: Organization, Unity, and Cohesion / Transitions

Getting to the Answer: When a transition word is underlined, check both the grammar and the logic of the transition. The underlined word connects Marryat’s successes at sea with his earning a medal for inventing a special lifeboat. The second idea does not follow from the first, making F incorrect. Choice H suggests that Marryat won medals for his earlier feats, which is not supported by the paragraph. Choice J inappropriately begins a list with its third item. Choice (G) is correct; the best transition is simply to add the final item to Marryat’s list of successes.

43. B **Difficulty:** Medium

Category: Sentence Structure and Formation

Getting to the Answer: Modifying words and phrases should be as close as possible to the person, thing, or action they describe. Marryat’s “novels and short stories” were published in England while he was at sea; (B) makes this clear. In A, “during this time” seems to be what was published in England, which is illogical. Choice C is awkwardly worded, and “by him” is redundant with “His greatest acclaim.” The sentence created by D is grammatically incorrect.

44. H **Difficulty:** Medium

Category: Usage

Getting to the Answer: Many ACT Usage questions hinge on preposition choice. The correct idiom here is “concentrate on writing,” as in (H). Choice F uses “concentrate for”; you might concentrate for a period of time, but you don’t concentrate *for* writing. Choice G uses “concentrate at”; you might concentrate at a place, such as school, but you don’t concentrate *at* writing. Choice J uses two prepositions that are inappropriate in context. You don’t concentrate *with* writing; additionally, “writing of full-time” suggests that Marryat was writing about the topic of full-time.

45. B **Difficulty:** Medium

Category: Organization, Unity, and Cohesion / Passage Organization

Getting to the Answer: The first paragraph in a passage typically introduces the passage’s topic. Only Paragraph 2

uses Marryat's full name: *Frederick Marryat*. This paragraph also introduces the topic: Marryat wrote about the adventures he had at sea. This makes Paragraph 2 a better opening paragraph than Paragraph 1; (B) is correct. Choice C interrupts the chronology by placing information about Marryat's enlistment in the navy after details about his first few years in the navy. Choice D similarly disrupts the chronological order by placing information about Marryat's enlistment in the navy after all of the details about his experiences in the navy.

Passage IV

46. J Difficulty: Low

Category: Knowledge of Language / Concision

Getting to the Answer: When DELETE is an option, read the underlined selection for relevance. The first paragraph compares the challenge of hitting a major league fastball to that of stopping a crank shot in lacrosse. The rest of the passage focuses on lacrosse, returning to the comparison to baseball in the third and fourth paragraphs. The description of quarterbacks is out of scope, so it should be deleted, (J). Choices G and H also concern the challenge faced by quarterbacks.

47. C Difficulty: Medium

Category: Sentence Structure and Formation

Getting to the Answer: The words *that* and *which* often begin dependent clauses; when one of these words is included in an underlined portion, make sure it doesn't create a sentence fragment. As written, this sentence has no predicate verb. *Lacrosse* is the subject, but "is often referred to" is the verb for the clause that begins with *that* and describes *Lacrosse*. Removing *that* makes "is often referred to" the main verb; (C) is correct. Choices B and D do not correct the fragment error.

48. G Difficulty: Medium

Category: Usage

Getting to the Answer: An adverb can modify a verb, adjective, or another adverb; it cannot be used to modify a noun. Here, the adverb *brutally* is used to modify the noun *game*. The adjective form *brutal* in (G) is correct. Although *brute*, H, can be used as an adjective, it is

incorrect in this context. Choice J uses *brutality*, which is a noun, where the adjective form is needed.

49. A Difficulty: Medium

Category: Punctuation

Getting to the Answer: When the main difference in the answer choices is punctuation, remember your tested rules. A comma is not needed to separate two items connected with *and*. No change is needed, making (A) correct. Choice B uses a semicolon, which would only be correct if an independent clause followed it. Choice C omits the conjunction, making the meaning of the sentence unclear. Choice D inserts a comma after *and*; commas are incorrect after the conjunctions in compounds.

50. G Difficulty: High

Category: Sentence Structure and Formation

Getting to the Answer: A pronoun and a verb are underlined, so you have several things to check. Make sure that the pronoun has a clear antecedent and is used consistently. Then make sure that the verb agrees with its subject and is in the correct tense. The pronoun *they* correctly refers to the *players*, but this paragraph is written in the present tense (*is, possess, stands, sprint*). The present tense *attempt* in (G) is correct. Choice F incorrectly uses the past tense. Choices H and J both incorrectly use the pronoun *one*, which does not agree with its plural antecedent *players*.

51. C Difficulty: Medium

Category: Organization, Unity, and Cohesion / Transitions

Getting to the Answer: The underlined portion is a transition word, so check whether the sentence is logically and grammatically correct. The transition connects the fastest recorded pitch speed with the fact that few pitchers can pitch at speeds in the upper nineties. The first idea is not the result of the second, so A is incorrect. The passage is citing statistics where no temporal relationship is implied; eliminate B. Choice D turns the sentence into a run-on. Choice (C) correctly contrasts the fastest recorded pitch with the idea that few pitchers come close to that record.

52. H **Difficulty:** High

Category: Punctuation

Getting to the Answer: If you're not sure how to approach a tough Punctuation question, try boiling the sentence down to its basics. Identify the subject and verb in each clause. Remember that a single comma should not separate a subject from its verb. Eliminate the introductory phrase and dependent clause from this sentence, and you're left with "the fastest crank shots on goal, can reach 110 mph." The subject is "crank shots," and the verb is "can reach." There should be no comma separating them, so (H) is correct. Choice F treats "the fastest crank shots on goal" as a nonessential phrase, but the sentence does not make sense without it. Choice G inserts two commas, treating *can* as nonessential. However, *can* is a necessary part of the verb phrase "can reach." Choice J places the comma between the two verbs in the verb phrase, which will never be correct.

53. D **Difficulty:** Medium

Category: Knowledge of Language / Concision

Getting to the Answer: Always consider redundancy when DELETE is an answer choice. "By high school players" is redundant in a sentence that begins "Even at the high school level." Choice (D) removes the redundant language. Choices B and C both contain redundancies.

54. H **Difficulty:** Low

Category: Topic Development / Supporting Material

Getting to the Answer: When asked whether to add new information, first consider whether it is relevant. The information about the composition of the field is not relevant to the point about the difficulty of stopping a lacrosse shot. Eliminate F and G. Choice (H) accurately describes the irrelevance of the new information, so it is correct.

55. D **Difficulty:** High

Category: Knowledge of Language / Precision

Getting to the Answer: When the answer choices are all single words with similar meanings, you are likely being tested on Precision. Choose the word that best describes the challenging job of the goalie. Choice A does not fit; to be absurd is to be ridiculous or meaningless,

which does not apply to the goalie's job. Choice B is incorrect because a task cannot be *more* insurmountable; if it is insurmountable, the task cannot be done, and there is no way to have a higher degree of that failure. A *harrowing* event is deeply disturbing. While the goalie's job is challenging, we do not get a sense that the narrator is disturbed by the job. Rather, the narrator seems in awe of lacrosse goalies. Thus, C is incorrect. Choice (D), *difficult*, accurately describes the goalie's job.

56. G **Difficulty:** Low

Category: Organization, Unity, and Cohesion / Transitions

Getting to the Answer: Think about what relationships these transitions depict. The preceding sentence gives an explanation of why a lacrosse goalie has a difficult task. This sentence adds to that explanation, telling you that players can make fake moves to trick the goalie. Choices F, H, and J all use transitions that indicate one idea is being added to another. Only (G) indicates a different relationship; "On the other hand" suggests a contrast between the ideas in the two sentences.

57. B **Difficulty:** Medium

Category: Organization, Unity, and Cohesion / Passage Organization

Getting to the Answer: When asked to connect paragraphs, be sure you read through them, considering both subject matter and tone. The keyword *however* in the second sentence of Paragraph 4 tells you that there must be some sort of contrast between the first and second sentences. The second sentence also refers to "Both of these endeavors," so the sentence in question should discuss both hitting a major league pitch and blocking a crank shot. Only (B) meets both of these requirements. Choices A and C do not provide the contrast indicated by *however*; additionally, the slang phrase "is tough" in A is inconsistent with the tone of the rest of the passage. Choice D does not mention hitting a major league pitch, making "Both of these endeavors" in the second sentence illogical.

58. F **Difficulty:** Medium

Category: Usage

Getting to the Answer: Get in the habit of *matching* verbs with their subject nouns. Since the subject of the underlined verb is the plural *Both*, this sentence needs no

change, (F). Choice G is singular and does not agree with the plural subject *both*. Choice H changes the verb to the past tense, but the passage is in the present tense. Choice J uses the conditional *would have*, but there is nothing conditional or hypothetical about the writer's opinion.

59. B **Difficulty:** Medium

Category: Sentence Structure and Formation

Getting to the Answer: A pronoun is underlined, so the issue may be pronoun-antecedent agreement, ambiguity, or a pronoun shift. Check context clues. The preceding sentence uses the third-person pronoun *One*. Because the underlined sentence adds a thought to the preceding sentence, the pronouns should be consistent. This makes (B) correct. Choice A uses the second-person pronoun *you*. Choice C shifts to the third-person plural *they*. Choice D shifts from *One* to *he*; it also illogically changes the verb tense.

60. J **Difficulty:** Medium

Category: Topic Development / Writer's Purpose

Getting to the Answer: This type of question requires you to determine the main idea of the passage. Your Reading skills will come in handy here. In the first paragraph, the writer argues that "stopping a crank shot in men's lacrosse" is "even tougher than taking a major league at-bat." All of the following details support this position. Choice (J) correctly identifies the main idea of the passage. Choices F and G are both automatically out, because the passage does not go into any depth about the strategies employed by baseball pitchers. Choice H is incorrect because the passage provides details in Paragraph 3 about the speeds achieved by baseball pitchers.

Passage V

61. A **Difficulty:** Medium

Category: Punctuation

Getting to the Answer: If you're not sure whether a phrase or clause should be set off from the sentence by commas, try reading the sentence without it. If the sentence no longer makes sense, then the commas are incorrect. The sentence is correct as written, (A). Choice B incorrectly separates the prepositional phrase "at a

breakneck pace" from the verb it describes. Choices C and D both incorrectly insert a comma between the subject *formats* and the verb phrase "have come and gone."

62. H **Difficulty:** High

Category: Sentence Structure and Formation

Getting to the Answer: More than one placement may create a grammatically correct sentence, so make sure that the sentence is also logical. What word in this sentence does *better* most logically describe? The main idea of the sentence is that the vinyl record replaced the gramophone, so something about the vinyl record must have been better than the gramophone. It makes the most sense to describe the vinyl record as sounding better, as in (H). Choice F places *better* before *supplanted*, which means *replaced*, but the sentence isn't comparing the way the vinyl record replaced the gramophone to the way another technology replaced the gramophone. Choice G puts *better* before *vinyl*, but *vinyl* isn't being compared to anything in the sentence that results. Choice J creates an illogical sentence, indicating that the gramophone was the better recording format even though it was replaced by the vinyl record.

63. C **Difficulty:** Medium

Category: Sentence Structure and Formation

Getting to the Answer: The *-ing* verb form cannot be the predicate (main) verb in a sentence. As written, this sentence is a fragment. Choice (C) corrects this by providing a predicate verb without introducing any additional errors. Choices B and D do not address the error.

64. G **Difficulty:** High

Category: Organization, Unity, and Cohesion / Transitions

Getting to the Answer: With Transitions questions, focus on the relationship between ideas. The two ideas here are contrasted—the average high school student knows about one type of recording but not the other. Choice (G) has the only contrasting transition word. Choices F and H incorrectly indicate a cause-and-effect relationship; it doesn't make sense that familiarity with the vinyl record would lead to unfamiliarity with the 8-track. Choice J uses *or*, which doesn't make sense in context. It wouldn't seem *curious* that younger people had either heard of one of

these recording techniques or not heard of the other; what's *curious* is that they are familiar with the older one, but not the more recent.

65. D **Difficulty:** Medium

Category: Usage

Getting to the Answer: A compound subject joined with *and* requires a plural verb form. The subject here is *DJs and those*, so the two verbs need to be in the plural form. Choice (D) is correct. Choices B and C change one verb but not the other.

66. J **Difficulty:** Medium

Category: Knowledge of Language / Concision

Getting to the Answer: Redundant information may be contained within the underlined selection, or the underlined information may be redundant because of information elsewhere in the sentence or paragraph. Since we already know that DJs and music-mixers *appreciate* vinyl recordings, it is redundant to also say that they *cherish* them; (J) is correct. Choice G does not address the error. Choice H is unnecessarily wordy.

67. A **Difficulty:** Medium

Category: Topic Development / Supporting Material

Getting to the Answer: When asked whether to add new information, note the context surrounding the proposed addition. The passage focuses on changes in music-playing technology, so the new information is relevant, adding an interesting detail. Eliminate C and D. The passage does not make an argument, so B is incorrect. Choice (A) correctly states the reason for making the addition.

68. H **Difficulty:** Medium

Category: Punctuation

Getting to the Answer: Aside words like *though*, *for example*, and *however* should be set off with commas, since the sentence would still make sense without them. Choice (H) places the commas correctly. Choices F and J only use one of the necessary commas to separate *though* from the rest of the sentence. Choice G uses a semicolon, which is correct only when used to combine independent clauses.

69. C **Difficulty:** High

Category: Punctuation

Getting to the Answer: Colons are used to introduce or emphasize a brief definition, explanation, or list. The information after the underlined selection serves as an explanation of the *something different* to which the writer refers. Choice (C) correctly places a colon before this information. Choice A uses no punctuation, which makes the sentence hard to understand. Choice B incorrectly uses a semicolon between an independent clause and an explanatory phrase. Choice D uses a comma, which doesn't set off the explanation as well as the colon does.

70. G **Difficulty:** Medium

Category: Organization, Unity, and Cohesion / Transitions

Getting to the Answer: When a transition word is underlined, check whether it makes sense logically and grammatically. The transition connects the fact that older technologies could not hold much music to the fact that newer technologies can hold more. These ideas stand in contrast to each other. Eliminate F and J because they lack contrast. Choice H is a contrast transition, but it makes the sentence ungrammatical. *Despite* cannot be a modifying phrase on its own, so eliminate H. Choice (G) is correct.

71. B **Difficulty:** Medium

Category: Usage

Getting to the Answer: Read idioms for both proper construction and logic in context. *Contrasting by* is idiomatically incorrect; the best choice here is (B), *Compared to*. Choice C uses incorrect grammatical structure. Choice D is idiomatically incorrect.

72. J **Difficulty:** Medium

Category: Topic Development / Writer's Purpose

Getting to the Answer: Read all question stems carefully. The correct answer choice will maintain the passage's tone and satisfy the stated purpose. The question stem asks for a choice that will "help readers understand the [MP3 player's] storage capacity and size," so you can immediately eliminate Choices F and H, which address the player's popularity, not its storage capacity. Both G and (J) discuss the MP3 player's storage capacity, but

(J)'s information is more specific and better satisfies the requirement of the question stem by focusing on the current technology rather than future improvements.

73. B **Difficulty:** High

Category: Knowledge of Language / Style and Tone

Getting to the Answer: Read the paragraphs in question with the suggested changes. How do they affect the essay? If the writer uses the pronouns *you* and *your*, he is directly addressing the reader. The effect is a more personal tone, (B). Choice A mentions suggested actions, which are not present in Paragraphs 5 and 6. The tone of the essay is not “formal and removed,” as C indicates. Choice D focuses on the writer’s knowledge, but changing the pronouns would not affect the facts presented by the writer.

74. F **Difficulty:** Medium

Category: Organization, Unity, and Cohesion / Passage Organization

Getting to the Answer: The first sentence of a paragraph typically introduces the topic of the paragraph, so look for the paragraph that contains details related to this sentence. Paragraph 2 explains how the gramophone record was replaced by the vinyl phonograph record. The new sentence introduces the idea that the gramophone record’s popularity did not last, so the beginning of Paragraph 2 is the most logical placement. Choice (F) is correct. The gramophone is not mentioned in Paragraphs 3, 4, or 5.

75. D **Difficulty:** Medium

Category: Topic Development / Writer’s Purpose

Getting to the Answer: This is a question about the main idea of the essay. By determining the main idea, you can quickly eliminate two answer choices. The main idea of the essay is that recording formats have changed and improved rapidly over the past 135 years and are likely to continue changing rapidly. This main idea does not include any technical explanation of how sounds are recorded, so you can immediately eliminate A and B. Choice C can also be ruled out since, far from discussing “a limited number of recording formats,” this essay mentions nearly all of them; (D) is correct.

MATHEMATICS TEST

1. E **Difficulty:** Low

Category: Essential Skills / Numbers and Operations

Getting to the Answer: To add or subtract fractions, you must first write them over the same denominator.

$$1\frac{2}{3} + 2\frac{3}{4} = \frac{5}{3} + \frac{11}{4} = \frac{20}{12} + \frac{33}{12} = \frac{53}{12} = 4\frac{5}{12}$$

Or, alternatively, plug the numbers into your calculator: $1.6667 + 2.75 = 4.4167$. When you enter (E) into your calculator, you get the same result.

2. H **Difficulty:** Low

Category: Essential Skills / Expressions and Equations

Getting to the Answer: The signs (multiplication dots) between these terms say to *multiply*—keep that in mind as you apply the rules for exponents. Be careful not to leave any parts out or multiply by any part more than once. First, multiply the number parts together: $2 \cdot 3 \cdot 6 = 36$, which immediately eliminates F and G. Then, x times x is x^2 , which eliminates J. Now multiply the y s to get $y^3 \cdot y^2 \cdot y^2 = y^{3+2+2} = y^7$, so (H) is correct. Remember that you’re counting the number of y s that are being multiplied, so add the exponents.

3. A **Difficulty:** Low

Category: Essential Skills / Numbers and Operations

Getting to the Answer: Make sure you solve for what the question is asking. Incorrect answer choices will often be other parts of the question or steps along the way. Ms. Ruppín earns $\frac{\$51,940}{245} = \212 per day. The company will save $\$212 - \$140 = \$72$ by paying the replacement instead, which is (A). Note that E is Ms. Ruppín’s pay and C is the replacement’s pay. Don’t fall for the traditional traps.

4. J **Difficulty:** Medium

Category: Essential Skills / Statistics and Probability

Getting to the Answer: Answering questions about averages always starts the same way: Set up the formula using the given information. The average is equal to the

sum of the terms divided by the number of terms. Let x be the fifth test score. Then the equation for this question is:

$$\begin{aligned}\frac{52 + 70 + 76 + 79 + x}{5} &= 75 \\ \frac{277 + x}{5} &= 75 \\ 277 + x &= 375 \\ x &= 98\end{aligned}$$

Choice (J) is correct.

5. C Difficulty: Low

Category: Essential Skills / Rates, Percents, Proportions, and Unit Conversion

Getting to the Answer: This may seem like a complicated question, but the first sentence tells you everything you need to answer the question. Divide the amount of water vapor per cubic meter, 6.7 grams, by the maximum, 19.2 grams:

$$\frac{6.7}{19.2} \approx 0.34896 = 34.896\% \approx 35\%$$

Choice (C) is correct.

6. J Difficulty: Low

Category: Essential Skills / Geometry

Getting to the Answer: Try to translate what you're asked for into concepts that you know. This question asks for the distance around the pool, also known as the perimeter. To find the perimeter of a rectangle, add up all the sides, keeping in mind that opposite sides have the same lengths: $2(30) + 2(10) = 80$ feet, which is (J).

7. C Difficulty: Low

Category: Essential Skills / Numbers and Operations

Getting to the Answer: Keep careful track of units. A film that is 3 hours 40 minutes long will be a total of $(3 \times 60) + 40 = 220$ minutes long. Half that is $\frac{220}{2} = 110$ minutes, or 1 hour 50 minutes, making (C) the correct answer.

8. F Difficulty: Low

Category: Essential Skills / Expressions and Equations

Getting to the Answer: Watching your positives and negatives is key! Subtracting when you mean to add (or vice versa) will lead you straight to an incorrect answer choice.

$$\begin{aligned}2x - 5 &= 7x + 3 \\ -5 &= 5x + 3 \\ -8 &= 5x \\ -\frac{8}{5} &= x\end{aligned}$$

Choice (F) is correct.

9. D Difficulty: Low

Category: Higher Math / Functions

Getting to the Answer: Sometimes Backsolving will be much easier than trying to work out the algebra. You're not going to be able to tell whether you need a larger or smaller number here, so start with A and work your way down until you have the answer.

A: $22 - 13 = 9$ and $49 - 31 = 18$. The difference between the first pair and the last pair is not the same. Eliminate.

B: $23 - 13 = 10$ and $49 - 39 = 10$. So far so good, but what about going from the second to the third number? $39 - 23 = 16$, which is not the same as the difference between the other pairs. Eliminate.

C: $24 - 13 = 11$ and $49 - 38 = 11$. However, $38 - 24$ is 14, not 11. Eliminate.

(D): $25 - 13 = 12$, $49 - 37 = 12$, and $37 - 25 = 12$. With a difference of 12, the sequence 13, 25, 37, 49 works. Choice (D) is correct.

If you would rather approach the question algebraically, imagine that you're adding the same thing three times in order to get from 13 to 49 (since you always add the same amount to get the next number). This means that:

$$\begin{aligned}13 + 3x &= 49 \\ 3x &= 36 \\ x &= 12\end{aligned}$$

Answers & Explanations

The difference is 12, which means the next two numbers are $13 + 12 = 25$ and $25 + 12 = 37$. You can check that $37 + 12 = 49$. Choice (D) is correct.

10. J **Difficulty:** Medium

Category: Higher Math / Algebra

Getting to the Answer: Keeping the values for \sqrt{x} , x , and x^2 straight is important. It's easy to quit a step too soon and confuse x with \sqrt{x} .

$$x = \sqrt[3]{729} = 729^{\frac{1}{3}} = 9$$
$$\sqrt{x} + x^2 = \sqrt{9} + 9^2 = 3 + 81 = 84$$

Choice (J) is correct.

11. A **Difficulty:** Low

Category: Essential Skills / Numbers and Operations

Getting to the Answer: If you divide 3 by 7 on your calculator, it will most likely stop after 8 or 10 digits. This should be enough, however, for you to see which numbers repeat. Here, the 428571 all repeat, so write the bar over all 6 digits. Choice (A) is correct.

12. K **Difficulty:** Medium

Category: Essential Skills / Statistics and Probability

Getting to the Answer: Pay close attention to words like "not" and "except"—these will make all the difference in a question. Probability is defined as the ratio of the number of desired outcomes to the total number of possible outcomes. The total number of balls in the bag is $10 + 10 + 8 = 28$. The number of non-green balls is $10 + 10 = 20$. The probability of choosing a ball that isn't green is $\frac{20}{28} = \frac{5}{7}$, which is (K).

13. A **Difficulty:** Low

Category: Essential Skills / Geometry

Getting to the Answer: Remember the rules for parallel lines and transversals. All acute angles are equal, and all obtuse angles are equal. If a is 110, then the corresponding angle below it has the same measure. If you also remember that the angle measure of a straight line is 180° , you're in good shape.

$$110 + d = 180 \rightarrow d = 70$$

$b + c = 180$ (because the two angles form a straight line)

$$b + c + d = 180 + 70 = 250$$

Choice (A) is correct.

14. J **Difficulty:** Medium

Category: Higher Math / Functions

Getting to the Answer: When a question includes a graph, be sure to fully understand it before trying to answer the question. Erin reached an altitude of 4,500 feet at 8 AM. She stayed at or above 4,500 feet until the final hour of her hike. This suggests that she was at or above 4,500 feet for at least 4 full hours. She descended the final 750 feet at a constant speed in one hour. More specifically, she descended the 250 feet from 4,750 feet to 4,500 feet in 20 minutes. Therefore, she was at or above 4,500 feet for 4 hours 20 minutes, which is (J).

15. A **Difficulty:** High

Category: Higher Math / Functions

Getting to the Answer: The question states that during each one-hour interval, Erin traveled at a constant speed. Therefore, a graph showing her speed should remain constant (horizontal on the graph) within each one-hour interval. The only graph that does this is graph (A). All other graphs show a change in speed during each interval, which suggests an acceleration or deceleration and, ultimately, movement at speeds that are not constant.

16. H **Difficulty:** Low

Category: Essential Skills / Expressions and Equations

Getting to the Answer: You don't need to calculate every row, column, and diagonal—because they should all be equal, you just need to look at one row or column that doesn't contain the middle square and one row, column, or diagonal that does contain the middle square. The first column sums to $-3x - 6x + 3x = -6x$. The second column should have the same sum. Call the missing square m :

$$4x + m - 8x = -6x$$
$$m - 4x = -6x$$
$$m = -2x$$

Choice (H) is correct.

17. E Difficulty: Medium

Category: Essential Skills / Rates, Percents, Proportions, and Unit Conversion

Getting to the Answer: Sometimes, part of the challenge of questions involving units of measurement is making such units—here, seconds and hours—consistent. To keep the units organized, consider using the factor-label method:

$$\frac{3 \text{ ft}}{1 \text{ sec}} \times \frac{60 \text{ sec}}{1 \text{ min}} \times 30 \text{ min} = 5,400 \text{ ft}$$

Choice (E) is correct.

18. J Difficulty: Low

Category: Higher Math / Statistics and Probability

Getting to the Answer: Once you know the rule, all questions like this are straightforward. Simply multiply the number of possibilities for each type to arrive at $5 \times 8 \times 3 = 120$, or (J).

19. A Difficulty: Medium

Category: Essential Skills / Rates, Percents, Proportions, and Unit Conversion

Getting to the Answer: Blindly doing calculations is not a good way to approach a question like this—many wrong answers involve doing the wrong calculations with the given numbers. Make a plan before you start manipulating numbers. Set up a proportion using the ratio of grain to bread. Be sure to keep track of the zeroes.

$$\begin{aligned} \frac{90,000}{150,000} &= \frac{x}{6,000} \\ \frac{9}{15} &= \frac{x}{6,000} \\ 54,000 &= 15x \\ 3,600 &= x \end{aligned}$$

Choice (A) is the answer.

20. H Difficulty: Medium

Category: Essential Skills / Rates, Percents, Proportions, and Unit Conversion

Getting to the Answer: When you know that the given parts add up to the whole, then you can turn a

part-to-part ratio into two part-to-whole ratios—put each term of the ratio over the sum of the terms. Here, because all the numbers in the set must be either even or odd, the parts do add up to the whole. The sum of the terms in the ratio 2:3 is 5, so the part-to-whole ratio for even numbers in the set to all the numbers in the set is 2:5. Use this to find the percent:

$$\frac{\text{Even numbers}}{\text{All the numbers}} = \frac{2}{5} \times 100\% = \frac{200\%}{5} = 40\%$$

That's (H).

21. E Difficulty: Medium

Category: Higher Math / Algebra

Getting to the Answer: If you're not comfortable simplifying the expressions on the left to see if they match the expressions on the right, you can Pick Numbers for a , b , and c , although this is likely to take more time. Algebraically, choice A is true because you can cancel the factor b in the numerator and denominator of the expression on the left. Choice B is true based on rules of exponents: $a^1 \cdot a^1 = a^{1+1} = a^2$, and the same for b . Choice C is true because both the numerator and the denominator equal ab , and anything divided by itself equals 1 (except for zero, but that's not relevant here). Choice D is true:

$$\frac{a + b}{b} = \frac{a}{b} + \frac{b}{b} = \frac{a}{b} + 1.$$

Choice (E) is false because you cannot divide the first terms and the second terms separately. When you divide, you can only divide out factors (things that are multiplied in both the numerator and denominator), not terms (things that are added or subtracted in the numerator and denominator).

22. K Difficulty: Medium

Category: Higher Math / Algebra

Getting to the Answer: Even if you forgot what slope-intercept form looks like, the answer choices tell you to solve for y . Before you start moving the x term and the constant, notice that if you add y to both sides of the equation, your work is done. The result is $-3x + 7 = y$, which matches (K).

Answers & Explanations

23. B **Difficulty:** Medium

Category: Higher Math / Algebra

Getting to the Answer: Before you factor a quadratic equation, make sure one side is equal to zero. Here, $x^2 - 8x = 8x$ becomes $x^2 - 16x = 0$.

$$\begin{aligned}x^2 - 16x &= 0 \\x(x - 16) &= 0 \\x &= 0 \text{ or } x - 16 = 0 \\x &= 0 \text{ or } x = 16\end{aligned}$$

The latter answer is (B).

24. J **Difficulty:** Medium

Category: Higher Math / Number and Quantity

Getting to the Answer: Be sure not to be tempted by answers that are partly right. The inequality $x \geq 1$ describes the right half of the values on the number line but leaves out the left half. The selected values on the number line consist of 1, everything greater than 1, -1 , and everything less than -1 . The easiest way to describe this set is that the absolute value of x , or its distance from zero on the number line, is greater than or equal to 1. This can be written in mathematical notation as $|x| \geq 1$. Thus, (J) is correct.

25. E **Difficulty:** Medium

Category: Higher Math / Geometry

Getting to the Answer: Even if a question talks about rounding, the correct answer may require no rounding whatsoever. The distance from a point to a line is measured perpendicularly, so you can be sure that the triangle is a right triangle. Because this distance is perpendicular and measured from the radius, it bisects the chord, which means the base of the triangle is 15. Use the Pythagorean theorem (or your knowledge of common Pythagorean triplets) to find the length of the hypotenuse, r :

$$\begin{aligned}8^2 + 15^2 &= r^2 \\r &= \sqrt{8^2 + 15^2} \\&= \sqrt{64 + 225} \\&= \sqrt{289} = 17\end{aligned}$$

That's (E).

26. G **Difficulty:** Medium

Category: Higher Math / Algebra

Getting to the Answer: Don't confuse your variables—here you're given V and you need to solve for t :

$$\begin{aligned}V &= \frac{5}{3}t + 0.05 \\0.575 &= \frac{5}{3}t + 0.05 \\0.525 &= \frac{5}{3}t \\t &= \left(\frac{3}{5}\right)0.525 = 0.315\end{aligned}$$

Choice (G) is correct.

27. B **Difficulty:** Medium

Category: Higher Math / Geometry

Getting to the Answer: If a question seems confusing, try rewording it in simpler terms. The sand over the soccer field will make a rectangular prism, and you're looking for the height if the volume is 15,000 cubic yards. The volume of a rectangular prism is length times width times height. The length of this soccer field is $100 + 18 + 18 = 136$ yards, the width is 60.5 yards, and the height is unknown. Put this information into an equation with the volume of sand:

$$\begin{aligned}l \cdot w \cdot h &= V \\136 \cdot 60.5 \cdot h &= 15,000 \\8,228h &= 15,000 \\h &\approx 1.82\end{aligned}$$

The value of h is between 1 and 2, making (B) the correct answer.

28. G **Difficulty:** Medium

Category: Higher Math / Geometry

Getting to the Answer: Most of the trigonometry on the ACT simply tests whether you know the definitions of sine, cosine, and tangent. Remember the method for finding the three basic trigonometric functions: SOHCAHTOA tells you that cosine is calculated by dividing the adjacent side by the hypotenuse. Let x be the length of \overline{AC} .

$$\cos A = \frac{\text{adjacent}}{\text{hypotenuse}}$$

$$\frac{4}{5} = \frac{x}{18}$$

$$5x = 4(18)$$

$$5x = 72$$

$$x = 14.4$$

Choice (G) is correct.

29. A **Difficulty:** Medium

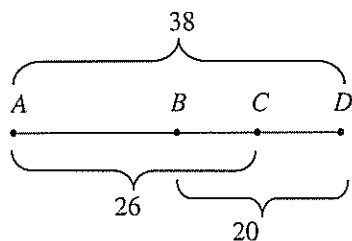
Category: Higher Math / Statistics and Probability

Getting to the Answer: Don't automatically start calculating the actual numbers of beds—the graph is already sufficient to answer this question. Bedtime has 2.5 pictures of beds (each representing 100 actual beds). There's a total of $1.5 + 2 + 4 + 2.5 = 10$ pictures of beds. So the fraction of the total beds that are at Bedtime is $\frac{2.5}{10} = \frac{25}{100} = \frac{1}{4}$, which is (A).

30. G **Difficulty:** Medium

Category: Essential Skills / Geometry

Getting to the Answer: Sometimes drawing a good diagram (or strategically using the one given) will be key to answering a question. Here, you should add the given measures to the figure to get started:



Because $26 + 20 = 46$, the overlapping part, BC , must be $46 - 38 = 8$, which is (G). If you didn't see that right away, you can always calculate from one piece to another. If $AC = 26$ and $AD = 38$, CD must be 12. If $CD = 12$ and $BD = 20$, BC must be 8, which again is (G).

31. A **Difficulty:** Medium

Category: Higher Math / Algebra

Getting to the Answer: The intersection of two lines is simply the one (x,y) point that makes both equations true.

You can solve this like any system of equations.

$$4x + 10 = 5x + 7$$

$$10 = x + 7$$

$$3 = x$$

Choice (A) is correct. If you had accidentally solved for the y -coordinate, you would have gotten E. Look out for traps like this in coordinate geometry questions.

32. H **Difficulty:** Medium

Category: Essential Skills / Rates, Percents, Proportions, and Unit Conversion

Getting to the Answer: To get Meri's rate in pages per hour, take the 96 pages and divide by the time in hours. The time is given as "2 hours and 40 minutes." Forty minutes is $\frac{2}{3}$ of an hour, so you can express Meri's time as $2\frac{2}{3}$ hours, or $\frac{8}{3}$ hours:

$$\begin{aligned} \text{Pages per hour} &= \frac{96 \text{ pages}}{\frac{8}{3} \text{ hours}} \\ &= 96 \times \frac{3}{8} = 36 \text{ pg/hr} \end{aligned}$$

This matches (H).

33. B **Difficulty:** High

Category: Higher Math / Statistics and Probability

Getting to the Answer: If an integer is chosen randomly from the first 50 integers, the probability of choosing any particular number is $\frac{1}{50}$, and the probability of choosing an integer with a digit of 3 is the number of integers with a digit of 3 divided by 50. The integers 3, 13, 23, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, and 43 are the only integers with 3s in them, for a total of 14 different integers, so the probability is $\frac{14}{50}$ or $\frac{7}{25}$, which is (B).

34. F **Difficulty:** Medium

Category: Higher Math / Algebra

Getting to the Answer: This question is much easier than it looks. Plug the expression given for s into the cubed expression and see what happens:

$$\begin{aligned}(t - \boxed{s})^3 &= \left(t - \boxed{4 + t}\right)^3 \\ &= (t - 4 - t)^3 \\ &= (-4)^3 = (-4)(-4)(-4) = -64\end{aligned}$$

That's (F).

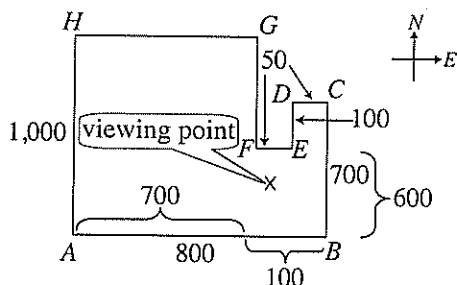
35. D **Difficulty:** High

Category: Higher Math / Geometry

Getting to the Answer: Feel free to draw all over your test booklet—that's what it's there for. This question tests your ability to read coordinates and to find a midpoint (although you may not realize this at first glance). Set up a coordinate system to compare points *B* and *F*. Because you're trying to find the distance relative to *A*, make *A* (0,0). Then *B* is at (800,0). Use the labeled distances to find the *x*-value of *F*, which is 700 ($AB - DC - FE$), and the *y*-value, which is 600 ($CB - DE$). This means *F* is at (700,600). The lookout point is at the midpoint of *B* and *F*, so you can use the midpoint formula:

$$\left(\frac{800 + 700}{2}, \frac{0 + 600}{2}\right) = (750, 300)$$

Using these coordinates, the lookout is 750 yards to the right (east) of point *A* and 300 yards up (north), which is (D).



36. K **Difficulty:** Low

Category: Essential Skills / Expressions and Equations

Getting to the Answer: Carefully translate potentially intimidating word problems. "Fifteen pounds less than" tells you to subtract 15 from some quantity. That quantity is three times the weight of the second-place watermelon, or $3w$, so $3w - 15$ is the correct expression. Choice (K)

is correct. Picking Numbers can also help if you have difficulty translating. Pick $w = 10$. Three times this quantity is 30 and 15 less than 30 is 15. Substitute 10 for w in each of the answer choices, eliminating any choice that does not equal 15:

F: $10 - 5 = 5$ Eliminate.

G: $10 + 15 = 25$ Eliminate.

H: $10 - 15 = -5$ Eliminate

J: $3(10) - 15 = 15$ Eliminate.

(K): $3(10) - 15 = 15$ Keep.

The only expression that works is (K).

37. E **Difficulty:** Medium

Category: Higher Math / Number and Quantity

Getting to the Answer: If you remembered that any number squared is positive, a quick look at the answer choices would tell you that (E), x^2y^2 , will be positive for any nonzero values of x and y , and is therefore the correct answer. If you didn't remember that, you should make a note of it, because it's a very important concept. You can also solve this one by Picking Numbers. If xy is negative, then either x or y is negative and the other is positive because a negative times a positive equals a negative. Picking a couple of pairs of numbers for x and y will tell you that both $x - y$ and $y - x$ can be either positive or negative depending on the exact values of x and y ; x^2y^2 will be negative if y is negative, and xy^2 will be negative if x is negative. However, any values you pick for x and y will give you a positive number for x^2y^2 , so again, (E) is correct.

38. F **Difficulty:** High

Category: Higher Math / Number and Quantity

Getting to the Answer: Picking numbers is the easiest, fastest way to answer this question. Choose a pair of numbers from each set and add them together. If you are unable to prove immediately that a set does not have the property described in the question stem, you may want to choose another pair. In set I, if you add 2 and 4, you get 6. Adding 12 and 8 gives you 20. Adding -2 and 8 gives you 6. Because each sum is a member of the set of even integers, set I seems to be true. For set II, adding 3 and 5 yields 8, which is not an odd integer. Therefore, II is not true. Finally, if you add two primes, say 2 and 3, you

get 5. That example is true. If you add 3 and 5, however, you get 8, and 8 is not a prime number. Therefore, only set I has the property, and the answer is (F).

39. C **Difficulty:** Medium

Category: Higher Math / Geometry

Getting to the Answer: Similar triangles have equal angles and proportional sides. Be sure to keep track of which side is proportional to which—the longest side of one triangle goes with the longest side of the other triangle and so on. Use the given ratio and the fact that the longest side of the second triangle has length 12 to set up a proportion comparing the longest sides of both triangles and the shortest sides of both triangles:

$$\begin{aligned}\frac{12}{20} &= \frac{x}{15} \\ 20x &= 12(15) \\ 20x &= 180 \\ x &= 9\end{aligned}$$

Choice (C) is correct.

40. K **Difficulty:** Medium

Category: Essential Skills / Geometry

Getting to the Answer: The angles of triangle YXZ sum to 180 degrees, so:

$$\begin{aligned}m\angle YZX + 20^\circ + 95^\circ &= 180^\circ \\ m\angle YZX &= 65^\circ\end{aligned}$$

The bases of the trapezoid, \overline{WX} and \overline{YZ} , are parallel, making $\angle YZX$ and $\angle TXZ$ alternate interior angles relative to transversal XZ . This means $m\angle TXZ = 65^\circ$, which is (K).

41. B **Difficulty:** High

Category: Higher Math / Functions

Getting to the Answer: Knowing the basic trig values for benchmark angles (multiples of 30° and 45°) would certainly help here. However, Backsolving also works because there are numbers in the answer choices. Use your calculator to find the sine of each angle (make sure your calculator is in “degree” mode first). Note that $\frac{\sqrt{3}}{2}$ is approximately equal to 0.866.

$$\sin 30^\circ = 0.5$$

$$\sin 45^\circ \approx 0.7071$$

$$\sin 60^\circ \approx 0.866$$

$$\sin 120^\circ \approx 0.866$$

$$\sin 135^\circ \approx 0.7071$$

$$\sin 150^\circ = 0.5$$

Choice (B) is correct.

42. F **Difficulty:** Medium

Category: Essential Skills / Numbers and Operations

Getting to the Answer: When given two ratios, make sure you check whether the second one is a fraction of the first group or a fraction of the total. The number of students continuing their studies = $\frac{1}{3}(896) \approx 299$. Of that 299, the number of students going to law school is $\frac{2}{5}(299) \approx 120$, which is (F).

43. D **Difficulty:** Medium

Category: Essential Skills / Numbers and Operations

Getting to the Answer: Knowing what each letter in the mnemonic “PEMDAS” represents will make simple number operations questions a breeze on Test Day. Substitute the values for a , b , and c , and evaluate the expression following the order of operations: $(a + b)(c - a) = (-2 + 4)[7 - (-2)] = (2)(9) = 18$. Choice (D) is the correct answer.

44. G **Difficulty:** High

Category: Higher Math / Functions

Getting to the Answer: If you remember your properties of logs, this question is very straightforward. Because $\log_b b^x = x$, the value of x is $\sqrt{7} \approx 2.65$, which lies between 2 and 3. Choice (G) is correct.

If you don’t remember this property, you’ll have to rewrite the logarithmic equation as an exponential equation and solve: $\log_7 7^{\sqrt{7}} = x$ is equivalent to the exponential form $7^x = 7^{\sqrt{7}}$. The bases are the same (7), so the exponents must be equal. This means $x = \sqrt{7} \approx 2.65$, which lies between 2 and 3.

Answers & Explanations

45. C **Difficulty:** Low

Category: Essential Skills / Statistics and Probability

Getting to the Answer: If a question that involves reading a table or chart seems easy, it probably is. All you have to do is be careful that you don't make an arithmetic error. Carefully calculate the number of employees by division, then add to find the total:

$$\text{Development} = 1 \times 4 = 4$$

$$\text{Marketing} = 2 \times 3 = 6$$

$$\text{Accounting} = 3 \times 2 = 6$$

$$\text{Public Relations} = 5 \times 5 = 25$$

$$\text{Total: } 4 + 6 + 6 + 25 = 41$$

That's (C).

46. J **Difficulty:** Medium

Category: Essential Skills / Rates, Percents, Proportions, and Unit Conversion

Getting to the Answer: Even though this question uses the word *percent*, you are never asked to find the actual percent itself. Set this question up as a proportion to get the answer more quickly. Use the definition: percent change equals amount of change divided by original amount.

$$\begin{aligned}\frac{16 - 6}{6} &= \frac{x - 12}{12} \\ \frac{10}{6} &= \frac{x - 12}{12} \\ 120 &= 6(x - 12) \\ 120 &= 6x - 72 \\ 192 &= 6x \\ 32 &= x\end{aligned}$$

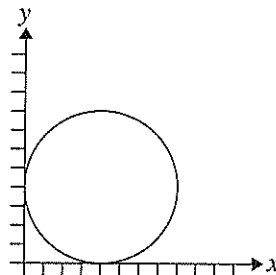
Choice (J) is correct.

47. D **Difficulty:** High

Category: Higher Math / Geometry

Getting to the Answer: Concepts such as "tangent to" are less scary if you work on becoming more comfortable

with math vocabulary. It also helps to draw a sketch like the one below:



As you can see in the sketch, the center of the circle is at (4,4), and the radius is 4. In the equation of a circle, $(x - h)^2 + (y - k)^2 = r^2$, the center is at (h,k), and the radius is r. Plug in the information you know to get $(x - 4)^2 + (y - 4)^2 = 4^2$, which is (D). If you're stuck, try plugging in a few points. For example, using either (4,0) or (0,4) eliminates all answers except B and (D), and (4,8) eliminates B.

48. H **Difficulty:** High

Category: Essential Skills / Rates, Percents, Proportions, and Unit Conversion

Getting to the Answer: The average speed is the total distance traveled divided by the total hours traveled. Liza drove at 40 miles per hour for 2 hours, for a total of 40×2 , or 80 miles. If she increased her speed by 25%, then she increased her speed by $0.25(40) = 10$, so her new speed was $40 + 10 = 50$ miles per hour. So she drove at 50 miles per hour for the next 3 hours, for a total of $50 \times 3 = 150$ miles. She went 80 miles and then 150 miles, for a total of 230 miles, and she drove for 2 hours and then for 3 hours, for a total of 5 hours. Liza's average rate for the trip was 230 miles divided by 5 hours, or 46 miles per hour, making (H) the correct answer.

49. A **Difficulty:** Medium

Category: Higher Math / Number and Quantity

Getting to the Answer: Even if you're not sure how to perform operations on matrices, you can probably reason out the answer. The number of people who will leave Marketing is $0.3(20) = 6$. You can compute the number for each department, then add them all together. This will give you the same result as multiplying the matrices.

$$\begin{aligned} & \left[\begin{array}{cccc} 20 & 12 & 40 & 10 \end{array} \right] \left[\begin{array}{c} 0.3 \\ 0.5 \\ 0.2 \\ 0.4 \end{array} \right] \\ &= 20(0.3) + 12(0.5) + 40(0.2) + 10(0.4) \\ &= 6 + 6 + 8 + 4 = 24 \end{aligned}$$

Choice (A) is correct.

50. J **Difficulty:** Medium

Category: Higher Math / Statistics and Probability

Getting to the Answer: The expected value of a random discrete variable is the weighted average of all possible values that the variable can take on. The weights are determined by the probability distribution. To find the expected value, multiply each possible value by its given probability and then add the products:

$$\begin{aligned} E(X) &= \frac{1}{5}(10) + \frac{1}{10}(11) + \frac{3}{10}(12) + \frac{3}{20}(13) + \frac{1}{4}(14) \\ &= 2 + \frac{11}{10} + \frac{36}{10} + \frac{39}{20} + \frac{14}{4} \\ &= \frac{40}{20} + \frac{22}{20} + \frac{72}{20} + \frac{39}{20} + \frac{70}{20} \\ &= \frac{243}{20} = 12\frac{3}{20} \end{aligned}$$

Choice (J) is correct.

51. A **Difficulty:** Medium

Category: Higher Math / Algebra

Getting to the Answer: Don't get too caught up in the language—figure out what the solution is, then think about which answer choice means that. Subtract x from both sides: $-2 < -5$. When is -2 less than -5 ? Never. What set has nothing in it? The empty set, which is (A).

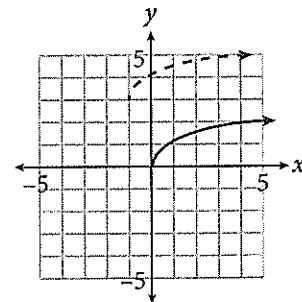
52. G **Difficulty:** High

Category: Higher Math / Functions

Getting to the Answer: The fastest route to the correct answer here (because you're given a graph of the parent square root function) is to write the domain and range of $g(x)$ and then adjust the values based on the transformation. The x -values of the curve shown in the

graph begin at 0 and extend to the right indefinitely, so the domain is $x \geq 0$. The transformation $(x + 1)$ shifts the graph to the left 1 unit, so the domain of $h(x)$ is $x \geq -1$. Eliminate H, J, and K. Likewise, the y -values of the curve shown in the graph begin at 0 and extend upward indefinitely, so the range is $y \geq 0$. The transformation $(+ 3)$ shifts the graph up 3 units, so the range of $h(x)$ is $y \geq 3$. This means (G) is correct.

Note that you could also quickly sketch the graph of $h(x)$ to find its domain and range. The graph would look like the dashed curve below:



53. B **Difficulty:** High

Category: Higher Math / Statistics and Probability

Getting to the Answer: Once you're strong on the basics, combining two concepts on seemingly complex questions like this one will be a breeze! The percent who chose one of the four named teachers is $25\% + 15\% + 35\% + 5\% = 80\%$. This means that 20% of the answers were grouped under "Other." A circle has 360 degrees, so the measure of the Other sector will be 20% of 360, or $0.2(360) = 72$ degrees, which is (B).

54. J **Difficulty:** Medium

Category: Higher Math / Functions

Getting to the Answer: Because you're looking for the sixth term of the sequence, call the sixth term x . Every term in this sequence is formed by multiplying the previous term by 3 and then subtracting 1, so the seventh term must be formed by multiplying the sixth term, x , by 3, and then subtracting 1; in other words, the seventh term is equal to $3x - 1$. Because the seventh term is 365, you have $365 = 3x - 1$. You can solve for x by adding 1 to both sides of the equation and then dividing by 3. The result is $x = 122$, which is (J).

55. **A** **Difficulty:** Medium

Category: Higher Math / Geometry

Getting to the Answer: A great way to test inequalities is to plug in a point or two. All the points in the shaded region of the graph should work in *both* inequalities. However, a more algebraic approach may save some time. Because only values of x greater than 6 are shaded, $x \geq 6$ should be one of the inequalities, eliminating E. Because the area *above* the slanted line is shaded, the other inequality should have a \geq symbol, eliminating C and D. To choose between (A) and B, examine the slanted line more closely. From the dot at the origin to the dot at (6,2), the line rises 2 units and runs 6 units, so the slope of the line is $\frac{1}{3}$, making (A) the correct answer.

56. **K** **Difficulty:** High

Category: Higher Math / Functions

Getting to the Answer: The question asks you to evaluate the function $f(x)$, replacing x with $(x + c)$. Replace any instance of x in the function definition with $x + c$. This means that $2(x + 7)$ will be $2(x + c + 7)$. Use the distributive property and multiply each term in parentheses by 2 to get $2x + 2c + 2(7)$, or $2x + 2c + 14$, which is (K).

57. **C** **Difficulty:** Medium

Category: Higher Math / Geometry

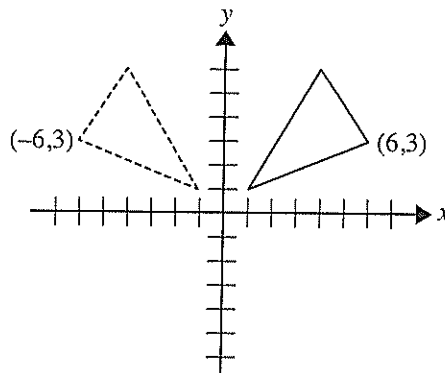
Getting to the Answer: If the answer choices are ranges of numbers, you might be able to save time by rounding numbers and estimating values. Start by finding the volume of the swimming pool: $V = \pi r^2 h = \pi(6)^2(4) = \pi(36)(4) = 144\pi$ cubic feet. To find the weight of the water in the pool, multiply the pool's volume in cubic meters by the weight of 1 cubic foot: 144π cubic feet \times 62 pounds per cubic feet $= 8,928\pi$ pounds. Because the answer choices consist of large ranges of numbers, you can estimate the volume by rounding π to the nearest whole number, which is 3. Using 3 as an estimate for π , $8,928\pi$ pounds is approximately 26,784 pounds, making (C) correct.

58. **G** **Difficulty:** Medium

Category: Higher Math / Geometry

Getting to the Answer: Drawing a triangle and flipping it over the y -axis will help you visualize this situation and

others like it. Choose nice coordinates to represent A and see what happens to those coordinates:



Based on the diagram, the y -coordinate stays the same, and the x -coordinate goes from positive to negative. This means that (v, w) will become $(-v, w)$, which is (G).

59. **C** **Difficulty:** High

Category: Higher Math / Algebra

Getting to the Answer: To get a in terms of b , you'll first need to get c in terms of b , because c is the variable the two equations have in common.

$$b = 3 - 2c$$

$$b + 2c = 3$$

$$2c = 3 - b$$

$$c = \frac{3 - b}{2}$$

$$a = 6\left[\frac{3 - b}{2}\right] + 7$$

$$a = 6\left(\frac{3 - b}{2}\right) + 7$$

$$a = 3(3 - b) + 7$$

$$a = 9 - 3b + 7$$

$$a = 16 - 3b$$

A perfect match for (C)!

60. **K** **Difficulty:** High

Category: Higher Math / Number and Quantity

Getting to the Answer: You don't have to know anything about complex numbers ahead of time. All the information you need is in the question stem. Treat i as a variable, write the squared binomials as repeated

multiplication, FOIL, and replace i^2 with -1 whenever it appears:

$$\begin{aligned} \frac{(2i + 2)^2}{(2i - 2)^2} &= \frac{(2i + 2)(2i + 2)}{(2i - 2)(2i - 2)} \\ &= \frac{4i^2 + 4i + 4i + 4}{4i^2 - 4i - 4i + 4} \\ &= \frac{4(-1) + 8i + 4}{4(-1) - 8i + 4} \\ &= \frac{8i}{-8i} = -1 \end{aligned}$$

Choice (K) is correct.

READING TEST

Passage I

Suggested Passage Map notes:

- ¶1–2: Dairyman Crick (DC) received letter about twang in butter
- ¶3: Several taste butter and agree
- ¶4: DC surprised, thought no garlic weeds in cow meadow
- ¶5–6: DC says dry meadow must be overhauled
- ¶7–9: Big group attempts to find small plant
- ¶10: Angel Clare (AC) walks next to Tess (T)
- ¶11–28: AC and T talk about the other milkmaids
- ¶29–30: T is humble, but still wants AC to choose her over the others

1. A Difficulty: Low

Category: Key Ideas and Details / Detail

Getting to the Answer: As Dairyman Crick realizes, the twang in the butter is the taste of garlic, and “probably one bite of it by one cow had been sufficient to season the whole dairy’s produce for the day” (lines 51–53). Given this prediction, choice (A) is a perfect match. Choice B is out of scope, and D is something Crick has thought in past years (lines 23–25). Choice C is true, but just because there’s garlic in the meadow doesn’t mean a cow has

eaten it. The cow needs to eat the garlic to produce butter with a garlic taste.

2. H Difficulty: Medium

Category: Key Ideas and Details / Inference

Getting to the Answer: Remember that the answer to an Inference question will not stray far from something said in the passage. The passage indicates that the search required all possible assistance because of its importance. The process also sounds very laborious. Look for a choice that incorporates these ideas. Choice (H) matches your prediction. Choice F is opposite; the difficulty of the search required the participation of many people. Choice G is opposite; the passage makes clear that the search was far from *simple*. Choice J is a distortion; the passage does not say that the search resulted in lowered production, but states that garlic consumption by a cow can affect a day’s dairy produce.

3. B Difficulty: High

Category: Key Ideas and Details / Inference

Getting to the Answer: Some questions may be phrased in a complex way; make sure you know what is being asked before making your prediction. The complaint arose because of the taste the garlic lent the milk. Look for the trait that would affect the milk’s taste. Choice (B) says that the root’s pungency is such that “one bite of it by one cow” (lines 51–52) could taint a whole day’s produce. Choice A is out of scope; the passage doesn’t focus on the appearance or classification of a shoot of garlic. Choice C is a misused detail; the “microscopic dimensions” (lines 30–31) of the offending shoot make it hard to find, but this is not the primary reason it presents a nuisance. Choice D is a misused detail; while there are not that many shoots in the field, there were nonetheless enough to cause a problem.

4. F Category: Key Ideas and Details / Detail

Difficulty: Medium

Getting to the Answer: In EXCEPT questions, even the correct answer may appear in the passage, just in the wrong place. Your notes should lead you back to lines 69–90, where Tess considers the other two girls’ supposed advantages. She later thinks to herself that Clare should

choose Izzy or Retty if he wants “a dairywoman and not a lady” (line 93), which matches (F). Choice G is opposite; Tess states that Izzy and Retty are “excellent dairywomen” while recommending them to Clare. Choice H is opposite; Tess begins her conversation with Clare by drawing his attention to how “pretty” Izzy and Retty are. Choice J is opposite; Tess explicitly states that Izzy and Retty “skim better” than she does.

5. D **Category:** Key Ideas and Details / Inference

Difficulty: High

Getting to the Answer: Some questions deal with a character’s attitude. Examine the author’s choice of language regarding the subject, and then look at the character’s own language and actions to help uncover how she feels. The key reference comes in lines 91–96, where the author describes Tess’s *mournful satisfaction* at steering Clare to the other girls. Look for a choice that incorporates these conflicting emotions. Choice (D) works. Tess is certainly sad about rejecting Clare’s attention, and she seems resolved—she took “pains to avoid him.” Choice A is a distortion; though her conversation makes her feel *mournful*, Tess also took *satisfaction* from the results. This suggests that she did not regret them. Choice B is a distortion; *discomfort* makes some sense, but Tess does not exhibit any confusion in recommending Izzy and Retty to Clare. Choice C is out of scope; neither of these emotions is supported by the passage.

6. H **Difficulty:** Low

Category: Key Ideas and Details / Detail

Getting to the Answer: Sometimes the answer to a question is right in the passage. Reference your notes and the passage directly instead of relying on memory. The end of the first paragraph tells us that Crick had “received a letter, in which a customer had complained that the butter had a twang.” Use this as your prediction. The passage confirms (H). Choice F is a misused detail; this tasting served to confirm the presence of the twang, not to cause awareness of it. Choice G is a distortion; the garlic plants are responsible for the twang, but Crick knew first of the twang and later of its cause. Choice J is out of scope; the customer wrote a letter but did not appear at Crick’s house.

7. A **Difficulty:** High

Category: Key Ideas and Details / Inference

Getting to the Answer: Many Inference questions may seem like Detail questions in that the inferences will be very close to the passage. The author writes in lines 54–56, “Differing . . . in natures and moods,” the characters “yet formed . . . a curiously uniform row.” This means that their usual differences were obscured in the effort to work as a team, which matches (A). Choice B is a distortion; in line 60, the characters are described as having an “elfish, moonlit aspect,” but this is due to the buttercups and not directly to their participation in a search. Choice C is out of scope; status differences are not discussed. Choice D is extreme; the author does indicate that individual differences are put aside for this task, but the passage doesn’t support the more permanent idea suggested by this choice.

8. G **Difficulty:** Medium

Category: Vocabulary-in-Context

Getting to the Answer: Consider this phrase in the context of the information surrounding it. At Tess’s suggestion, Clare is watching Izzy and Retty. When Tess notes that Retty is “coloring up,” Clare asks why and Tess responds “Because you are looking at her.” When someone is looking at us we tend to be self-conscious, which often makes us blush, which matches (G). Choice F is out of scope; there is no mention of lipstick, and we can also infer that these hard-working milkmaids, searching for garlic in a field, did not wear lipstick. Choices H and J are also out of scope; we do not know what Retty is saying, if anything, and there is no suggestion that Retty has stopped searching the ground to shield her face from the sun.

9. D **Difficulty:** High

Category: Craft and Structure / Function

Getting to the Answer: This question appears to be asking about a detail, but it is really asking you to understand a character’s viewpoint. Think more broadly about the context of the passage before predicting an answer. Tess gives Clare several reasons why he should be interested in the other girls, and then takes “pains to avoid him.” Tess is trying to encourage Clare to seek the company of the other milkmaids because she believes

each of them to be a more suitable wife for him than she would be. Choice A is out of scope; the passage never suggests that Tess believes the other milkmaids are unable on their own to get Clare's attention. Choice (D) is supported by lines 72–75. Choice B is a distortion; *chance* in the citation refers to an opportunity, not luck, as used in this choice. Choice C is extreme; nothing in the passage supports such a strong statement. The author appears to suggest that Clare is more interested in Tess than in the others.

10. G **Category:** Craft and Structure / Writer's View

Difficulty: High

Getting to the Answer: The context of the cited material is usually essential to understanding it. Go back to the passage before predicting an answer. The information before the cited statement tells you that Tess was willing to sacrifice her own interests, but not so committed as to say something as strong as this. Her conflicting feelings about the situation prohibit her from making this statement. Choice F is a distortion; Tess does not wish to compete with the other girls. Choice (G) matches the thrust of the text. Choice H is opposite; the author suggests that she is still wrestling with these feelings. Choice J is a distortion; Tess only partly wants Clare to leave her alone. She was unable to make the cited statement because she partly does not wish this.

Passage II

Suggested Passage Map notes:

Passage A

- ¶1: Present-day people think science is unquestionable
- ¶2: History shows that science is not always correct
- ¶3: People think science remains constant, but questioning leads to progress

Passage B

- ¶1: Historically people were skeptical about science
- ¶2: Scientific research should be questioned
- ¶3: Pharma. company studies should be scrutinized
- ¶4: Policy decisions should be based on balance of faith and doubt

11. B **Difficulty:** Low

Category: Key Ideas and Details / Detail

Getting to the Answer: The first mention of policy makers is in paragraph 1, lines 13–16, where the author writes that they “treat the results of every latest study as if they were surefire truths.” In other words, they accept the results without question, which matches (B). Choices A, C, and D are opposites.

12. H **Difficulty:** Low

Category: Craft and Structure / Writer's View

Getting to the Answer: Because the question cites a specific part of the passage, reread the relevant text to make a prediction. In line 33, the author uses the word *probabilities* to refer to the scientific discipline that studies the comparative chances of events taking place, which matches (H). Choice F is opposite; the author believes that science is uncertain, so theories will not necessarily be proven true. Choice G is out of scope; the author does not include information about how future scientists will impact current data. Choice J is a distortion; the author does state that “an unfounded prejudice stemming from a desire for scientific constancy can actually discourage inquiry,” but that is not related to the idea that science is an implementation of probabilities.

13. C **Difficulty:** Medium

Category: Craft and Structure / Function

Getting to the Answer: The word *complacent* follows examples of predictable events, including a car starting and a power plant running without problems. Since we assume these events will always be the same, we become used to them and don't question them at all. In the same way, we have a “a complacent faith in the reliability and consistency of science” and assume that study results are always correct. Choice (C), *unquestioned*, is a synonym for *complacent*. All other choices are incorrect definitions based on the context provided.

14. G **Difficulty:** Medium

Category: Key Ideas and Details / Detail

Getting to the Answer: If you have not made notes about various scientific studies in your map, scan through the passage looking for each of the answer choices, and

eliminate those that were not accepted by the public. Choice F is questioned by “some critics,” who we cannot assume are the general public. Choice H is in Passage A, not Passage B, and J isn’t in the passages at all. That leaves (G) as the correct answer.

15. B **Difficulty:** Medium

Category: Craft and Structure / Function

Getting to the Answer: Use your passage notes to help predict an answer for a Function question that refers to an entire paragraph. The first paragraph of Passage B outlines the way that skepticism toward science has changed over time. Choice (B) matches the function of paragraph 1. Choice A is out of scope; no new hypothesis is introduced in this paragraph. Choice C is a misused detail; paragraph 2 introduces the issue of public policy, but this question asks specifically about paragraph 1. Choice D is a misused detail; underlying causes are discussed in the third paragraph, not the first.

16. F **Difficulty:** High

Category: Key Ideas and Details / Inference

Getting to the Answer: Remember not to make too big a logical leap; the correct inference will not stray far from the text. The author believes that people are too ready to believe the results of scientific studies. Choice (F) fits well with the text and represents a logical, supportable inference. Choice G is out of scope; neither author supports the idea of government control and regulation. Choice H is a misused detail; this idea applies to Passage A. Choice J is out of scope; the belief that the reliability of science has decreased isn’t discussed in the passage.

17. C **Difficulty:** High

Category: Integration of Knowledge and Ideas / Synthesis

Getting to the Answer: Keeping track of each author’s primary viewpoints or beliefs can help you to more quickly evaluate and eliminate answer choices. Passage B describes a solution in which people understand enough about science to assess its reliability for themselves, but Passage A claims that people don’t do this because they desire a world of certainties. The contrast between striving for more knowledge and clinging to easy beliefs is captured in (C). Choice A is a distortion; the actions and attitudes of policymakers don’t prevent people from

becoming better educated. Choice B is a misused detail; Passage B discusses the difficulties of obtaining impartial results, but this is not relevant to the question. Choice D is out of scope; the author of Passage A discusses ethical questions, but this is not related to the solution specified in Passage B.

18. F **Difficulty:** Low

Category: Key Ideas and Details / Detail

Getting to the Answer: Remember that the answers to Detail questions are always stated directly. By turning first to the passages, you can accurately predict the correct answer and not be misled by misused details. Passage A includes the phrase “present-day industrial societies” in the first sentence, and Passage B mentions “present-day industrial societies” in the second paragraph. Choice (F) matches your research. Choice G is a misused detail; this phrase is from paragraph 2 in Passage A. Choice H is a misused detail; this is included in paragraph 3 in Passage B. Choice J is a misused detail; this is mentioned in the first paragraph of Passage B only.

19. B **Category:** Key Ideas and Details / Detail

Difficulty: Medium

Getting to the Answer: Prediction is key in Detail questions. Wrong answer choices will often reference other details erroneously. In paragraph 2, the passage directly states, “In the late 19th century, when Italian astronomer Giovanni Schiaparelli first detected seas and continents on the planet Mars, many people balked at the idea of Earth-like topography on the Red Planet,” which shows the fallibility, or inaccuracy, of a scientific certainty. Use this as a prediction. Choice (B) matches the prediction. Choice A is a misused detail; this example is mentioned in Passage A, not Passage B. Choice C is a distortion; the author of Passage B discusses this in paragraph 4, but these are not examples of the fallibility of scientific certainties. Choice D is a misused detail; this example is mentioned in Passage A, not Passage B.

20. F **Difficulty:** Medium

Category: Integration of Knowledge and Ideas / Synthesis

Getting to the Answer: When a question stem includes a specific line reference, you usually need to read a little before and a little after those particular lines in order to

understand the full context of the quoted portion. The word cited in the question stem comes from the third paragraphs of Passage A and Passage B. Passage A says, “technological advances engage increasingly complex moral questions within fields such as pharmaceutical developments,” and Passage B states, “Some critics of company-funded studies argue that the level of misrepresentation included in such studies borders on immoral.” Choice (F) matches with the references to moral questions in both passages. Choice G is a misused detail; this is mentioned in Passage B only, in the last paragraph. Choice H is a misused detail; this is mentioned in Passage A only, in the third paragraph. Choice J is a misused detail; drug testing and analysis is discussed in paragraph 3 of Passage A but not in paragraph 3 of Passage B.

Passage III

Suggested Passage Map notes:

¶1: Walter Scott (S) born in Scotland in 1771, wrote Scottish ballads

¶2: S poetry brought fame

¶3: 1814, S started writing novels anonymously for \$

¶4: 1820 S wrote *Ivanhoe* set in England, became Baronet

¶5: wrote for \$ until his death in 1832

¶6: S (1) popularized historical novel, (2) rehabilitated Highland culture

¶7: S responsible for Scottish banks retaining right to issue own banknotes

21. B Difficulty: Medium

Category: Key Ideas and Details / Global

Getting to the Answer: This question focuses on the big picture. You should be predicting the purpose and main idea of every passage so you can deal with questions like this quickly. Your notes should tell you that the author is writing more about Scott’s achievements than about his weaknesses. You can predict that the answer will be favorable overall. Choice A is out of scope; this choice lacks a sufficient focus on Scott. Choice (B) matches your prediction. Scott’s success is stressed throughout, and the last two paragraphs point out Scott’s impact in several areas. Choice C is a distortion; although you read that

Scott had financial difficulties, the financial aspect is much less important than is the success of his writing. Choice D is a distortion; the passage offers no support for this claim.

22. J Difficulty: Medium

Category: Key Ideas and Details / Detail

Getting to the Answer: On Detail questions, first find the appropriate section in the passage. Read the question carefully; sometimes a single word can make a major difference in selecting the correct answer. Note that the question asks about why Scott started writing novels, not poetry, so look to paragraph 3, where the author first talks about Scott’s novels. The first line tells you that financial difficulties led Scott to write a novel, which met with great success. Look for a choice that matches this idea. Choice F is out of scope; the author doesn’t list this outcome as a result of Scott’s polio. Choice G is out of scope; nothing in the passage mentions “copyright violations.” Choice H is out of scope; the author doesn’t reference whether the ballads sold well or not. Choice (J) fits the prediction.

23. D Difficulty: Low

Category: Key Ideas and Details / Detail

Getting to the Answer: If your notes don’t help, titles, whether italicized or capitalized, are easier to spot when skimming. In the third paragraph, you see that the author references *Waverly* to mention that Scott left his name off it because he was “mindful of his reputation as a poet.” Use this as your prediction. Choice A is a distortion; your research tells you that it was his reputation as a poet, not as a lawyer, that concerned Scott. Choice B is a misused detail; the author tells you that Scott found writing anonymously *fun* only after he believed that it would not damage his reputation as a poet. Choice C is out of scope; although the fact that Scott was “widely rumored” to be the author indicates that there was public interest in the novels’ author, there is nothing to suggest that interest spurred sales. Choice (D) matches the prediction.

24. J Difficulty: Medium

Category: Craft and Structure / Writer’s View

Getting to the Answer: Use the passage to help you understand the author’s view of this concept. First find where he refers to Scott and Scottish history, and

then focus on the tone of that discussion. Consider the author's overall attitude toward Scott, which is positive. In paragraph 4, the author mentions Scott's popularization of the tartan and kilt and writes that he turned them into symbols of national identity. Also, in paragraph 6, you see in lines 85–86 that Scott's novels "rehabilitated Highland culture after years in the shadows." Choice F is opposite; the author's tone is more admiring than this. Choice G is opposite; to say that Scott "rehabilitated Highland culture" sounds important. Choice H is a distortion; Scott wrote novels, not "serious analyses of Scottish history." Choice (J) matches the research above.

25. A **Difficulty:** Medium

Category: Key Ideas and Details / Global

Getting to the Answer: When in doubt, keep in mind the overall tone that the author takes in the passage. This question asks about Scott's reputation after his death. Since the overall structure of the passage is chronological, it is likely that the answer will come toward the end. The last three paragraphs give evidence of Scott's continued popularity: you read that his novels continued to sell after his death, eventually covering his debts; that Edinburgh's central railroad station was named after his first successful novel; and that his picture is on Scottish currency today. You can predict that his reputation has only grown or is still positive. Choice (A) matches the prediction, and a quick check of the other choices shows that this is the only one with a positive description. Choice B is opposite; the passage clearly states that Scott's novels continued to sell well after his death. Choice C is a distortion; his debts were unpaid, but this did not affect Scott's reputation. Choice D is a distortion; the passage does mention such imitators (lines 80–81), but the author doesn't suggest that they damaged Scott's reputation.

26. F **Difficulty:** High

Category: Vocab-in-Context

Getting to the Answer: Sir Walter Scott never put his own name to his novels, but instead attributed them to "the author of *Waverly*," or to no author at all. He continued to do this even when his novels became so popular that it would not have hurt his reputation to reveal his name. Nevertheless, he "maintained the façade," meaning that he continued to hide his own authorship under the pretense that he was not the author of the

novels, a match for (F). Choice G is another definition of *façade*, but it doesn't make sense in the context of the passage. Choice H has a negative connotation, while the author says Scott maintained the pretense "out of a sense of fun." Choice J also doesn't make sense in the sentence.

27. B **Difficulty:** Low

Category: Craft and Structure / Function

Getting to the Answer: To understand the function of a word in context, reading the entire sentence it appears in should be enough. Ask yourself why the placement of this statue would be fitting—the author has not referred to Wallace before this point. The author has, however, previously stressed Scott's affinity for his native land, Scotland, for which Wallace is a great historical figure. Look for a connection with Scotland among the choices. Choice A is out of scope; nothing in the passage suggests that Scott ever wrote a novel about Wallace. Choice (B) fits your prediction. Choice C is out of scope; this fails to address the issue of Wallace. Choice D is out of scope; the passage doesn't support this.

28. H **Difficulty:** Medium

Category: Craft and Structure / Writer's View

Getting to the Answer: You will need to answer this question from your overall impression of the passage rather than any specific paragraph. First, you need to decide whether the author's attitude is positive or negative. Look to the close of the passage; you know that the author believes Scott was responsible for two major trends. The focus on Scott's achievements indicates that the author admires Scott's work. Choice F is a distortion; nothing indicates that the author is skeptical toward Scott's achievements. Choice G is opposite; both of these adjectives are too negative. Choice (H) matches your prediction. Choice J is out of scope; the passage gives no such indication of jealousy.

29. D **Difficulty:** Low

Category: Key Ideas and Details / Global

Getting to the Answer: Paragraph references focus your research. Use your notes and reference the passage as needed. The author writes that Sir Walter refused to declare bankruptcy, insisting on putting his home and income into a trust that would eventually pay back his

creditors completely. Predict that he was committed to paying his debts back. Choice A is opposite; the passage clearly contradicts this. Choice B is out of scope; the author never discusses the cause of Scott's debts. Choice C is out of scope; the author doesn't mention such annoyance on Scott's part. Choice (D) matches the prediction.

30. F **Difficulty:** Low

Category: Craft and Structure / Writer's View

Getting to the Answer: Read the complete sentence for context. You may need to read the ones before and after as well. The prior sentence states that Scott was working as a lawyer, after which you read the first mention of Scott's writings. The subsequent sentences make clear that the emphasis has shifted to Scott's literary career. So the sentence including *dabbling* deals with Scott's first forays into writing. Look for a choice that captures that idea. Choice (F) matches the thrust of the prediction. Choice G is a misused detail; Scott's printing press is not mentioned until paragraph 3, and the author draws no connection between his *dabbling* and his financial troubles. Choice H is a distortion; he was certainly inexperienced, but there is no evidence that his work was inferior. Choice J is a distortion; *dabbling* refers to Scott's writing, not to his interest in history.

Passage IV

Suggested Passage Map notes:

- ¶1: Lemur (L) part of suborder of primates, nocturnal; flying lemurs not primates
- ¶2: L found on Madagascar, larger are nocturnal, smaller are diurnal
- ¶3: All L species are endangered b/c deforestation and hunting
- ¶4: Ring-tailed lemur (RTL) most populous L in zoos
- ¶5: RTL physical characteristics
- ¶6: RTL baby v. adult characteristics
- ¶7: RTL live in forests or open brush, require primary forests
- ¶8: RTL behavior, territory
- ¶9: RTL communication
- ¶10: RTL breeding

31. C **Category:** Key Ideas and Details / Detail

Difficulty: Low

Getting to the Answer: Wrong answers on Detail questions often include material relevant to other sections of the passage. Be sure you research the passage carefully to interpret the context correctly. You are looking for a factor that is responsible for the lemurs' survival. Your notes should help you find your way to paragraph 2, where the author first discusses Madagascar. The author says the lemurs "were safe from competition" on the island. That should factor into the correct choice. Choice A is a misused detail; the author does mention that lemurs have large reflective eyes, but doesn't relate this to survival. Choice B is a misused detail; scent marking is related to their social organization, not their survival. Choice (C) paraphrases the relevant sentence in paragraph 2. Choice D is a misused detail; the author mentions *hierarchy* later, but not as an explanation for the lemurs' survival.

32. F **Difficulty:** Medium

Category: Key Ideas and Details / Detail

Getting to the Answer: Taking good notes and marking the passage will help you on Detail questions that lack line references. From your notes, you should see that social organization is discussed in paragraph 8. The writer states that there are separate hierarchies for each gender and that "females tend to dominate the troop." Look for this among the choices. Choice (F) matches your prediction. Choice G is a distortion; the author does reference *foraging*, but not in the context of social organization. Choice H is out of scope; the author doesn't offer support for such a sweeping statement. Choice J is opposite; the author writes that females tend to dominate the troop.

33. D **Difficulty:** Medium

Category: Vocab-in-Context

Getting to the Answer: Since *odd* is a common word, it's important to think about it in the specific context of what the author has written. He uses the word when describing what ring-tailed lemurs usually eat—fruit, leaves, and seeds, plus an insect every now and then. Thus *odd* refers to occasionally, as (D) says. All other answer choices are possible definitions of *odd*, but none make sense in the sentence.

34. G **Difficulty:** Medium

Category: Key Ideas and Details / Detail

Getting to the Answer: The answers to Detail questions are stated directly in the passage—you can find the answer with research. This point is fairly obscure and may not be reflected in your notes. If you have to, skim for *zoo*, which appears in paragraph 4. The author states that ring-tailed lemurs are the most populous lemurs in zoos and follows that by writing “they reproduce readily in captivity.” Use that as your prediction. Choice F is out of scope; the author doesn’t make such a contention. Choice (G) is a good paraphrase of the text referenced above. Choice H is out of scope; the author does not make this point. Choice J is a distortion; the author addresses *foraging*, but not in connection with zoos.

35. D **Difficulty:** Medium

Category: Key Ideas and Details / Inference

Getting to the Answer: When given a line reference, move quickly and read at least that entire sentence to discern context. The author indicates that lemurs need to live in primary forest to survive. The clearing will likely endanger the lemurs’ continued survival. Look for a match to this idea. Choice A is out of scope; the author does not refer to this. Choice B is out of scope; the author does not refer to this. Choice C is out of scope; the author doesn’t reference such predators here. Choice (D) matches the research above.

36. H **Difficulty:** Low

Category: Key Ideas and Details / Detail

Getting to the Answer: This is an EXCEPT question. That means you need to find three choices that are mentioned in the text and one that is not mentioned. Don’t confuse the two. Your notes can help you to locate “olfactory signals”; they appear in paragraph 9. Work through the paragraph, crossing off the three choices that do appear. Choice F is opposite; this appears in line 88–89. Choice G is opposite; this appears in line 90–91. The author does not reference (H), which makes it the correct answer. Choice J is opposite; this appears in line 88.

37. B **Difficulty:** Medium

Category: Key Ideas and Details / Detail

Getting to the Answer: Detail questions are answered directly in the passage. Referencing it before making a prediction will help you avoid misused details. Note that the question concerns all Lemuriformes, not only ring-tailed lemurs. This leads you to the first paragraph, which discusses lemurs in general. You may be unsure exactly which characteristic to predict, so compare this paragraph to the choices. Choice A is a distortion; many lemurs are nocturnal, but not all lemurs are. Choice (B) makes sense. Paragraph 1 states that lemurs represent the “evolutionary predecessor” of monkeys and apes, a paraphrase of what you see here. Choice C is opposite; at the end of paragraph 1, the author clearly states that these species are not actually lemurs (*Lemuriformes*). Choice D is opposite; the first sentence in paragraph 2 states that lemurs are found on Madagascar “and some smaller surrounding islands.”

38. H **Difficulty:** Medium

Category: Key Ideas and Details / Inference

Getting to the Answer: You need to “read between the lines” to find the correct answer. But don’t make too great a logical leap. Check your notes for the second paragraph, and read it again if necessary. The question is very open-ended, so work through the choices and compare them to the information in the paragraph. Choice F is opposite; the author states that the pygmy mouse lemur is the smallest species and that smaller species are typically nocturnal, not diurnal. Choice G is out of scope; the author does not discuss why certain species of lemur have become extinct. Choice (H) works. The author writes that the indri was the largest lemur. The next sentence states that “the larger species” are all extinct. Therefore, you can infer that the indri is extinct. Choice J is opposite; in paragraph 1, you learn that lemurs are described as evolutionary *predecessors* of monkeys, meaning monkeys are descended from them.

39. C **Difficulty:** Medium

Category: Key Ideas and Details / Detail

Getting to the Answer: Your map should note that paragraphs 5 and 6 describe the physical attributes of

ring-tailed lemurs, and paragraph 6 states that “the very young animals have blue eyes while the eyes of all adults are a striking yellow.” Since there’s no other reference to anything else that changes when ring-tailed lemurs become adults, (C) has to be the correct answer. Choice A is out of scope; there’s nothing in the passage that supports this. Choice B is contradicted by the sentence “Ring-tailed lemurs are thought to require primary forest” (lines 66–67). D is opposite; flying lemurs are not lemurs at all, as lines 11–12 state.

40. F **Difficulty:** Medium

Category: Key Ideas and Details / Detail

Getting to the Answer: Because this question asks which question is not answered, it functions as an EXCEPT question. Find the issue that is not addressed in the passage. The answers to these questions could fall anywhere in the passage. Your notes, though, should help you find the information you need. The author touches on (F) in paragraph 3, saying that “options are limited.” This implies that the question of survival has not been fully answered. If you’re unsure at this point, work through the others to see that they are answered. Choice G is opposite; this is answered in the second sentence of paragraph 2. Lemurs survived because they did not have to compete with monkeys and apes. Choice H is opposite; looking at the last paragraph, you see that the female is fertile for only one day a year, and that gestation lasts 146 days. So the female can have only one litter, and the author states that a litter consists of one or two babies. Choice J is opposite; this is answered in paragraph 8. The author states lemurs eat fruit, “leaves, seeds, and the odd insect.”

SCIENCE TEST

Passage I

1. C **Difficulty:** Medium

Category: Evaluation of Models, Inferences, and Results

Getting to the Answer: According to Scientist 2, the positions of electrons are “random and yet localized” as they move around the nucleus. They don’t follow fixed

orbits, but they are more likely to be in some places than others. Thus, one way to describe the movement of electrons would be to say that it’s “almost random,” as in (C). Choice A is incorrect because it better describes the Bohr model. Choices B and D are incorrect because they contradict both models; both suggest that electrons move around the nucleus in some way.

2. J **Difficulty:** High

Category: Evaluation of Models, Inferences, and Results

Getting to the Answer: Scientist 2 mentions the wave function in order to explain the way in which an electron’s possible position is given boundaries. These boundaries determine the shape of an atom, which in turn helps to define many of its properties. Choice (J) is thus correct. Choice F conflates the two models, but only the Bohr model describes orbits and only the electron cloud model deals with probabilities. Choice G is incorrect because neither scientist suggests a dependence between charge and the color of light emitted by an atom. Choice H is incorrect because Scientist 2 only discusses the wave-particle duality with respect to electrons.

3. A **Difficulty:** Low

Category: Evaluation of Models, Inferences, and Results

Getting to the Answer: Although the two models offer differing accounts of how electrons move around the nucleus, both agree that electrons move rather than remaining in a fixed position. Choice (A) is thus correct. Choice B is incorrect because neither view suggests that charge is based on probability; only the electron cloud model discusses probability, but there it is applied only to position, not charge. Choice C is incorrect because neither scientist discusses the composition of protons and neutrons. Choice D is incorrect because both views discuss the components of atoms, suggesting that atoms can in fact be divided into smaller parts.

4. G **Difficulty:** Medium

Category: Evaluation of Models, Inferences, and Results

Getting to the Answer: Scientist 1 cites the fact that excited electrons emit very specific wavelengths of light when reverting to lower energy orbits, and makes the

following argument in favor of the Bohr model: "If the position of electrons is not specified, the precise wavelengths of light that are emitted cannot be explained." This poses a direct challenge to the view of Scientist 2, so (G) is correct. Choice F is incorrect because it contradicts the views of both scientists. Choice H is incorrect because it's cited by Scientist 2 as support for the probability cloud idea. Choice J is incorrect because it's a fact agreed to by both scientists.

5. A **Difficulty:** High

Category: Evaluation of Models, Inferences, and Results

Getting to the Answer: According to Scientist 2, "[t]he uncertainty of any one electron's position and the nature of its existence as a charged particle contribute to an understanding of the wave-particle nature of matter and energy." The findings mentioned in the question stem further support this wave-particle duality. Therefore, (A) is correct. Choice B is incorrect because traveling in distinct paths is part of the Bohr model. Choices C and D are incorrect because they suggest the observation supports the Bohr model. Choice D also wrongly supplies reasoning in favor of the electron cloud model rather than the Bohr model.

6. H **Difficulty:** Medium

Category: Evaluation of Models, Inferences, and Results

Getting to the Answer: Scientist 2 begins by stating that "[t]he precise location of electrons cannot be detected." This challenges the idea from the Bohr model that electrons travel in fixed paths, which would allow their locations to be identified precisely. Choice (H) is therefore correct. Choice F is incorrect because it is not inconsistent with the Bohr model (Scientist 1 would say that electrons have a 100% chance of occupying one of the fixed orbit paths, and a 0% chance of being elsewhere). Choices G and J are incorrect because they are not discussed by Scientist 2.

7. C **Difficulty:** Medium

Category: Evaluation of Models, Inferences, and Results

Getting to the Answer: According to Scientist 1's account of the Bohr model, "[e]lectrons move around an atom's nucleus in precise, co-planar, concentric circular

orbits." Choice (C) is the only option that reflects this. Choice A is incorrect because it shows an atom without a nucleus. Choice B shows an atom with orbiting electrons, but the electrons do not orbit in co-planar, concentric circles. Choice D would be a better representation of the electron cloud model.

Passage II

8. G **Difficulty:** Low

Category: Scientific Investigation

Getting to the Answer: This question simply requires you to find the answer choice that reflects differences in sampling between the two studies. The passage notes that sampling was conducted "at ground level" for Study 1 but "from the tops of two different monitoring towers" for Study 2. Choice (G) is thus correct. Choice F contradicts the passage—in both experiments, sampling was done on a daily basis. Choice H is tempting, but it switches the studies, making the statement untrue. Choice J does not work either—both pollutants mentioned were sampled in each experiment.

9. B **Difficulty:** Medium

Category: Scientific Investigation

Getting to the Answer: Although several of these procedures might be worthwhile, only (B) correctly proposes studying all three variables mentioned in the question stem (carbon monoxide, sulfur dioxide, and respiratory ailments). Choice A includes a respiratory ailment (asthma), but it is incorrect because temperature was not one of the variables mentioned. Choices C and D are incorrect because they describe procedures that would not provide any information about respiratory ailments.

10. J **Difficulty:** Medium

Category: Scientific Investigation

Getting to the Answer: To test the hypothesis from the question stem, you'd need an experiment that relates sulfur dioxide and the acidity of lakes. Only (J) connects sulfur dioxide to the acidity of lake water, so it is correct. Choice F is incorrect because it doesn't provide a link between sulfur dioxide and lake acidity.

Choice G might be tempting because the passage does mention respiratory ailments, but G also fails to provide a direct link between sulfur emissions and lake acidity. Choice H is also incorrect: while the amount of coal burned might increase the amount of sulfur dioxide emitted by the plant, doing this alone won't tell you anything about the link between sulfur dioxide and the acidity of the lake.

11. A **Difficulty:** Medium

Category: Scientific Investigation

Getting to the Answer: The first paragraph describes the motivation behind the studies: "Scientists noted an increase in acid rainfall and reports of respiratory ailments in a certain community. They suspected that both of these outcomes were due to increased levels of airborne pollutants, such as carbon monoxide and sulfur dioxide, entering the atmosphere in that community." Because Study 1 involved measuring the levels of these pollutants near two highways, it is reasonable to conclude that the scientists were trying to determine if pollution from traffic was the source of these respiratory problems. This fits well with the hypothesis expressed in (A). Choice B is incorrect because the power plant is only a factor in Study 2, not Study 1. Choice C incorrectly states that Study 1 was concerned with measuring rainfall. Choice D is incorrect because it fails to involve respiratory ailments.

12. F **Difficulty:** Medium

Category: Interpretation of Data

Getting to the Answer: The studies in this passage indicate that emissions from highway traffic and from power plants contribute to increases in airborne pollutants. Building more highways, as in (F), would consequently increase, rather than reduce, highway traffic and subsequent pollution, making (F) the best answer. Choice G is incorrect because it would help: highway traffic is indicated as a source of pollutants, so traffic limits would help reduce pollution due to highway vehicles. Choice H would also help: burning coal is the source of the power plant's pollutant emissions, so reducing coal burning would reduce emission levels. Choice J is incorrect for a similar reason: filters would decrease the amount of sulfur dioxide reaching the outside air, thereby reducing nearby levels of this airborne pollutant.

13. D **Difficulty:** Medium

Category: Interpretation of Data

Getting to the Answer: If emissions become less concentrated farther away from their sources, what would you expect to happen if you moved closer to the source? You could expect emissions measured closer to a source (the roadway, in this case) to be more concentrated. Thus, the correct answer will be larger than the data point for Highway 1 on January 7 in Table 1, which is 3.2 ppm. Choice (D) is the only option larger than 3.2 ppm, so it is correct. Choices A, B, and C are all smaller than 3.2 ppm.

14. F **Difficulty:** Medium

Category: Interpretation of Data

Getting to the Answer: Look carefully at Table 2, which compiles the results of Study 2. According to the table, ozone and sulfur dioxide levels both show an increase followed by a decrease in both towers, supporting statement I. Because I is true, G can be eliminated. Carbon monoxide levels were always greater in Tower 1, not Tower 2, so statement II is false, meaning that H and J can also be eliminated. Choice (F) must therefore be correct. This can be confirmed by determining that statement III is false: Tower 2 had the highest level of emissions on January 8, not January 9.

Passage III

15. D **Difficulty:** Medium

Category: Interpretation of Data

Getting to the Answer: Each of the tables includes rubber, which always produces an amperage of 0.0 mA. This means A can be eliminated. Study 2 and Study 3 both use 6 mm wire, but only Study 3 was conducted at 30°C, so use Table 3 to find the range. The highest value is 12.1 mA, so the range is 0.0 mA to 12.1 mA. Choice (D) matches this range. Choices B and C give the ranges for Study 1 and Study 2, respectively.

16. G **Difficulty:** Low

Category: Evaluation of Models, Inferences, and Results

Getting to the Answer: Comparing the data in Tables 1 and 2 shows that for most of the materials tested in these

experiments, the current carried by the wire increases as the diameter of the wire increases. The exception is rubber, which does not carry current in any of these trials, so it is the only material that does not support the hypothesis that a larger diameter results in more current carried. Choice (G) is thus correct.

17. D **Difficulty:** Medium

Category: Interpretation of Data

Getting to the Answer: Start by looking at what happens to current when the diameter of a zinc telluride (ZnTe) wire increases. Tables 1 and 2 show that when the diameter increases, the amount of current conducted increases. For temperature, comparing Tables 2 and 3 shows that when temperature decreases, current increases. Thus, to find the wire that would carry the largest current, you want the wire with the largest diameter and the lowest temperature. Choice (D) is thus correct.

18. F **Difficulty:** Medium

Category: Scientific Investigation

Getting to the Answer: The conditions described in the question stem differ from the setup of any of the studies conducted in the passage, but the key is to focus on the most important information. The materials of the wires are copper, rubber, and steel. According to the results of the 3 studies, rubber always yields an ammeter reading of 0.0 mA. This makes it an insulator, according to the definition provided in the introductory paragraph, that is, “a substance that prevents an electric charge from traveling between objects.” Because the rubber wire interrupts the flow of charge in the circuit, no current will be conducted, so the ammeter will read 0.0 mA. Choice (F) is thus correct.

19. A **Difficulty:** Medium

Category: Scientific Investigation

Getting to the Answer: The scientist hypothesized that decreasing the temperature increases the amount of current a wire will carry, and this hypothesis was generally supported by a comparison of the results in Tables 2 and 3, with the exception of rubber, which never conducted a current. Consequently, if the temperature of a wire were instead *increased*, the amount of current carried would *decrease*, except for rubber, which would remain

unchanged at 0.0 mA. Choice (A) is thus correct. Choice B is incorrect because only the current for rubber would remain unchanged. Choice C is incorrect because the current would never increase at a higher temperature; it would only decrease or remain unchanged. Choice D is incorrect because the current would decrease for most of the materials.

20. J **Difficulty:** Medium

Category: Evaluation of Models, Inferences, and Results

Getting to the Answer: You can see by looking at the tables that rubber conducts 0.0 mA of electricity throughout all three studies. Because it prevents the flow of current, this makes it an insulator, based on the definition provided in the passage. However, because the results of all three studies are the same for rubber, it does not appear that its capacity as an insulator is affected by changes to its diameter or temperature. Choice (J) is thus correct.

21. D **Difficulty:** Low

Category: Scientific Investigation

Getting to the Answer: The question asks you to identify which effect the scientist should investigate next to learn more. Choice A, however, was revealed by comparing the results of Studies 2 and 3, while B was revealed by comparing Studies 1 and 2. Choice C was investigated in all of the studies. That leaves (D), which is correct because wire length was held constant throughout all of the studies, so it would be an appropriate choice to manipulate in a future study to determine its effect on current conducted.

Passage IV

22. J **Difficulty:** Low

Category: Interpretation of Data

Getting to the Answer: The question stem points you to the top two curves in Figure 1. To find the greatest difference, determine the average air temperature in August for the urban area (the solid line) and rural area (the dash-dot line) for each of the years listed in the answer choices. The respective August urban and rural temperatures were approximately 75°F and 68°F in 2007; 77°F and 70°F in 2010; 73°F and 66°F in 2012; and 74°F

and 63°F in 2014. The differences in temperature between urban and rural are 7°F in 2007, 2010, and 2012, and 11°F in 2014. Therefore, the correct answer is (J). Alternatively, rather than calculate the exact differences, you could eyeball the graph and estimate; it shouldn't be too hard to see that the gap between the top two curves is wider for 2014 than for the other years.

23. A Difficulty: Low

Category: Interpretation of Data

Getting to the Answer: Look at Figure 3 to find out which pair of months had the closest average wind velocities. According to Figure 3, the average wind velocity for the rural area was approximately 16 mph for January, 16 mph for April, 13 mph for July, 20 mph for September, and 23 mph for November. Since the average wind velocities for January and April are about the same, the correct answer is (A).

24. H Difficulty: Medium

Category: Evaluation of Models, Inferences, and Results

Getting to the Answer: The question stem mentions Study 3, in which the scientists studied wind velocity and air quality. Eliminate G and J, which mention average air temperature (the focus of Study 1). The new evidence states that buildings increase frictional drag on air flowing over built-up terrain. An increase in frictional drag would lead to lower wind velocity, which means that having more buildings lowers wind velocity. According to Figure 3, the average wind velocity is lower for the urban area than for the rural area, which suggests that there are more buildings in the urban area. Thus, the conclusion in the question stem that the rural area has more buildings than the urban area would NOT be justified based on the results. The correct answer is (H). Even if you were unaware of what effect frictional drag would have on wind velocity, you could still eliminate F because it provides the reasoning that wind velocity is lower for the rural area, which is directly contradicted by Figure 3.

25. C Difficulty: Medium

Category: Evaluation of Models, Inferences, and Results

Getting to the Answer: According to Study 1, "compared to the relative humidity of the rural area, the relative humidity of the urban area was 2% lower in the winter

and 6% lower in the summer." Figure 1 shows a similar relationship for average air temperature differences. The difference in the average summer air temperatures between the urban and rural areas is greater than the difference in the average winter air temperatures. Thus, because they follow similar trends, you can conclude that relative humidity differences and average air temperature differences are correlated. The correct answer is (C). Choice A is not true according to the passage: the relative humidity is lower for the urban area. Choice B is true but does not answer the question, which concerns both winter and summer temperature differences. Choice D is incorrect because it mentions wind velocity, which was measured in Study 3 and not Study 1.

26. G Difficulty: Medium

Category: Evaluation of Models, Inferences, and Results

Getting to the Answer: The hypothesis from the question stem suggests that since building materials and road surfaces increase the air temperature of urban areas, urban areas would have higher air temperature than rural areas. According to Figure 1, the summer temperatures of the urban area during August are higher than those of the rural area during August. Therefore, yes, the results do support the hypothesis. Eliminate H and J. Choice (G) correctly states summer temperatures in the urban area were higher than those in the rural area, making (G) the correct answer.

27. B Difficulty: Medium

Category: Scientific Investigation

Getting to the Answer: Make sure your response draws from the information given in the passage and question stem. According to Study 3, there are about 10 times more dust particles in the air of the urban area than of the rural area. Given that dust particles act as hygroscopic nuclei, it is likely that the urban areas will have more rain because of the higher level of dust in the air at those areas. And, indeed, Figure 2 shows that the urban area received more precipitation than the rural area. Thus, the correct answer is (B). Choices A, C, and D are not true statements. According to the passage, compared to the urban area, the rural area had higher wind velocity, fewer clouds, and higher relative humidity.

28. F **Difficulty:** Medium

Category: Interpretation of Data

Getting to the Answer: Based on Figure 1, 75°F is approximately the average air temperature for the urban area in the summer, while Figure 2 suggests that the average annual precipitation for the urban area is about 40 inches. Therefore, this third area is likely also an urban area, which could be expected to have a similar wind velocity to the urban area that was studied. According to Figure 3, the wind velocity for the urban area varied between about 8 and 12 mph. Thus, it is reasonable to expect that this third area will have an average wind velocity of somewhere between 8 and 12 mph, as in (F).

Passage V

29. A **Difficulty:** Medium

Category: Interpretation of Data

Getting to the Answer: Based on Figure 2, Mercury speeds up as it approaches perihelion and slows down as it moves away. Choice (A) is thus correct. Choice B suggests the opposite trend. Choice C suggests that orbital velocity decreases, but that happens only as the planet moves away from perihelion. Choice D suggests that orbital velocity increases, but that happens only as the planet moves toward perihelion.

30. H **Difficulty:** Low

Category: Interpretation of Data

Getting to the Answer: A planet with a mass in between that of Jupiter and Saturn, assuming a similar density, would have a radius that lies between the radii of Jupiter and Saturn, that is, between 58,232 and 69,911 km. Only (H) falls into this range. Choice F suggests a radius less than that of Mercury. Choice G suggests a radius between that of Earth and Venus. Choice J suggests a radius larger than that of Jupiter.

31. B **Difficulty:** Low

Category: Interpretation of Data

Getting to the Answer: According to Table 1, Saturn has a mass of 5.68×10^{26} kg, Jupiter a mass of 1.90×10^{27} kg,

Earth a mass of 5.97×10^{24} kg, and Mercury a mass of 3.29×10^{23} kg. Of these, Jupiter has the greatest mass, so (B) is correct.

32. G **Difficulty:** Medium

Category: Interpretation of Data

Getting to the Answer: Based on Figure 2, Mercury's orbital velocity at 75×10^6 km away from perihelion is roughly 53 m/s. The next point at which it has this orbital velocity is 75×10^6 km as it recedes from perihelion. Choice (G) is thus correct. This can also be seen from the symmetry of Mercury's curve in Figure 2: the velocity at a particular distance while approaching is always equal to the velocity at that same distance while receding. Choice F is incorrect because it corresponds to a velocity of about 50 m/s. Choices H and J are incorrect because both correspond to a velocity of about 56 m/s.

33. C **Difficulty:** Medium

Category: Interpretation of Data

Getting to the Answer: Acceleration is simply the change in velocity per unit of time, so a larger acceleration due to gravity will cause a falling object to reach a given velocity more quickly—in other words, it will cause the object to fall faster. Because Earth has a higher acceleration due to gravity than does Venus, objects on Earth fall faster than objects on Venus. Choice (C) is thus correct.

34. G **Difficulty:** Medium

Category: Interpretation of Data

Getting to the Answer: According to Table 1, Mercury has a mass of 3.29×10^{23} kg and a radius of 2,440 km, while Venus has a mass of 4.87×10^{24} kg and a radius of 6,052 km. The mass and radius of the new planet in the question stem fall in between the values for Mercury and Venus, so it is reasonable to predict that it would have a velocity at perihelion that falls in between Mercury's velocity of about 59 m/s and Venus's velocity of about 35 m/s. Choice (G) is correct because it is the only value that falls within this range.

Passage VI

35. A **Difficulty:** Medium**Category:** Interpretation of Data

Getting to the Answer: As can be seen in Figure 1, titration of a strong base into a strong acid generates a curve that starts with an acidic pH (a value considerably less than 7), followed by a sharp increase to a basic pH (a value considerably greater than 7). Titration of a strong acid into a strong base would show the reverse behavior, starting well above pH 7 and finishing well below pH 7. Choice (A) is thus correct. Choice B has an appropriate appearance, but it is incorrect because it bottoms out near a neutral pH (near 7) instead of an acidic pH. Choices C and D are incorrect because their curves do not match the general shape seen in Figure 1.

36. H **Difficulty:** Medium**Category:** Interpretation of Data

Getting to the Answer: This question asks about the equivalence point, which is defined in the passage as “the point at which equal concentrations of an acid and base are present.” The passage also notes that the change in pH immediately after and immediately before the equivalence point will be drastic, so you should look for the point in the middle of the sharp increase for Solution A in Figure 1. Based on the figure, the equivalence point for Solution A is found at a pH of about 7 (after approximately 24 mL of NaOH have been added). According to Table 1, phenol red has a pH range of 6.8 – 8.4, making it the only indicator that includes pH 7 in its range. Choice (H) is thus correct. Choices F and G are incorrect because they change colors at too low of a pH, while J is incorrect because it changes colors at too high of a pH.

37. C **Difficulty:** Low**Category:** Interpretation of Data

Getting to the Answer: This question is easier to answer if you remember from high school chemistry that 7 is a neutral pH. The passage describes the chemical equation as “a typical acid-base neutralization reaction.” Thus, if it goes to completion without excess reactants, the

resulting solution should have a neutral pH of 7. Choice (C) is correct. Choices A and B present acidic pH values, while D presents a basic pH.

38. G **Difficulty:** Medium**Category:** Interpretation of Data

Getting to the Answer: Figure 2 presents the reaction rate as a percentage of the rate at the equivalence point. Thus, any percentage value greater than 100% corresponds to a reaction rate that is faster than the rate at the equivalence point. The curve in Figure 2 is above 100% between approximately 1 mL and 24 mL. Choice (G) is correct because it is the only option with a volume in this range.

39. B **Difficulty:** Medium**Category:** Interpretation of Data

Getting to the Answer: Familiarity with the names of elements and simple compounds will help to answer this question. According to the reaction presented in the passage, sodium (Na) moves from NaOH to NaCl as the reaction proceeds forward. NaCl is sodium chloride, commonly known as table salt. Choice (B) is correct. Choices A and C are incorrect because water (H₂O) and hydrochloric acid (HCl) do not contain sodium. Choice D is incorrect because sodium hydroxide (NaOH) is where the sodium is found before the reaction, not after it.

40. J **Difficulty:** Medium**Category:** Interpretation of Data

Getting to the Answer: Because the question asks about a reaction rate, look at Figure 2 first. The highest reaction rate (with a value of over 125%) is found after about 5 mL of NaOH have been added. Figure 1 shows low pH values for both solutions at 5 mL of NaOH. Choice (J) is correct because it is the only option that features a low pH. Choices F and G are incorrect because both points are found after about 24 mL of NaOH have been added, when the reaction rate is only 100%. Choice H is incorrect because a high pH in Solution A is only found after about 25 mL or more of NaOH have been added, when the reaction rate drops below 100%.

WRITING TEST**LEVEL 6 ESSAY**

In today's world the truth of the matter is that a high school diploma no longer makes a job applicant competitive; a college degree is now required for most high-paying jobs which also offer advancement opportunities. Given the high cost of a college education—and even community college fees may be beyond the reach of some students—taking out a student loan is almost a given for the college student. The question is, however, how these loans should be structured. Several options are offered, but the fairest and most workable is that of no-interest government and bank loans.

Firstly, as the issue states, student loans can take years to repay, even when the former students earn good salaries and repay the loan month by month. This is simply because the cost of a college education is so high. The average cost of a four-year college ranges from almost \$ 10,000 per year to over \$ 35,000. For all but the wealthiest of students, paying for college without a loan is prohibitive. My cousin spent years trying to pay off her student loans and, in the long run, defaulted and had to declare bankruptcy. Surely this is not the intention of either the government, other lending institutions, or colleges.

Loans are not special entitlements; they are fundamental to allow students of all economic backgrounds to attend college. As such, the government should not be making money from student loans. Interest is essentially a fee charged for borrowing money, with some sort of collateral insuring repayment. In the case of a college loan, that collateral is the student's future earning capacity. Granted, the principal must be repaid, but beyond that, taking money out of earnings cuts into the former student's ability to use that money for other purchases, including housing, which are so vital in driving the country's economy. Charging only the principal needed to pay for college insures that students can not only pay the yearly tuition, but are also more likely to be able to settle the entire loan and after graduation, contribute to the economy as a whole. In the special circumstance that some students need more time, it is then fair to add some further amount of payment as recognition that the original agreement was not fulfilled. This is the fairest solution and one that provides the greatest opportunity for students to go to college and pay off their loans.

The second option defines a college education as a commodity, which is something that can be bought and sold and also implies choice. Although it can be argued that a college education can be bought, it is not the same as oil or wheat. It is not used for the moment but for the future and it cannot be compared to loans for items that people choose to buy, such as cars or refrigerators. Loans to support an educated populace as the backbone of our society are not the same as car loans and should not be treated as such. If we truly believe in education, we must make allowances for the loans required to fund it. As we have all learned, college is an investment in the future. It has become less and less a personal choice and more of a requirement for job consideration. When considered on a supply and demand basis, it is even more important, since studies show that jobs requiring a college degree are in more and more demand. A capitalist market requires the ability to be competitive and creative; this is exactly what a college education provides. Educated students

are far more important than almost anything else a loan can support, and any accommodations, including making college loans less expensive than other loans, is for the benefit of society and the future, and should be promoted, not prohibited.

Finally, the third point of view is simply ridiculous. There is absolutely no way to determine how much money a person will earn in the future. We can make considered guesses—lawyers will earn more than waiters—but there is no guarantee that the lawyer will not be fired and the waiter will not become a restaurant owner. Basing the loan amount on future earnings can also mean that the graduate has no opportunity to change his career from a high-earning one, such as a lawyer, to one that may truly be his heart's desire, such as being an artist. Furthermore, even if one were to train to be a lawyer, it is possible that he will not find a job that pays him the same amount of money the loan projected him to earn. At one time, investment counselors were earning a lot of money, and therefore would have been low-risk borrowers, but after the investment scandal several years ago, many investment counselors are doing other jobs, have no job, or may even be in jail. College graduates are just starting their careers; how well they do, what they earn, and whether they stay in their original jobs are unknown and cannot be used to determine a loan amount.

College loans should be as accessible and easy to repay as possible. There is nothing more important than an educated and far-sighted generation of college graduates. They are the ones who will run the government, captain business, and teach children. To deprive them of their college opportunity by making it too hard for them to either get or repay adequate loans is to deprive this country of those who will steer its future.

SCORE EXPLANATION (6666)

This essay exhibits strong and consistent writing skills. The introduction summarizes the arguments to come and heralds the author's point of view. Each following paragraph then discusses one perspective and its implications, using specific and appropriate examples. The conclusion reiterates the writer's opinion and moves it from specific to general, connecting it to a wider concept.

Ideas and Analysis (6)

The author's ideas are clearly, logically, and persuasively stated: a college-educated populace is the backbone of the country, and since paying for college is difficult, student loans should be granted without adding the financial burden of interest. Ideas are cohesive, build on each other, and are well developed. Insight and analysis are excellent, examining the issue from both the perspective of the student still in college and the college-educated worker, with implications about the cost of education, the importance of a college education, and the ability of the earner to contribute to the national economy. The conclusion that to make tuition borrowing a heavy burden "is to deprive this country of those who will steer its future" provides both a succinct ending as well as additional insight.

Development and Support (6)

The line of reasoning throughout the essay is clear, consistent, and forceful. Starting out with a general statement about the importance of a college education in today's workplace, the author then enlarges on this idea with specifics about the cost of education (with supporting numbers) that require most students to take out loans. She continues with the argument that college loans are not "special entitlements," cogent reasons why these loans should be interest-free, and a well-argued critique of the other two options. Support is excellent, including the example of the

Answers & Explanations

writer's cousin and comment that "Surely this [default] is not the intention of either the government or colleges" and reference to a capitalist economy and consumer spending that drives it. The examples of lawyers and investment counselors are highly relevant to the author's critique of the other two perspectives and show her ability to connect actual events to her thinking.

Organization (6)

The organization is excellent, with good transitions ("Firstly," "The second option," "Finally"). The writer's perspective is firmly introduced in the opening paragraph and reiterated in the conclusion, and all body paragraphs are in logical and persuasive order. The three paragraphs supporting the writer's point of view are persuasive in their individual perspectives on the issue and contrast well with the two paragraphs critiquing the other viewpoints. There is a central idea, maintained throughout both in direct support and in contrast to other perspectives, and the essay is coherent, flows well, and makes a strong and effective argument.

Language Use (6)

Word choice, writing style, and vocabulary all enhance the argument. High-level vocabulary with words such as *concomitant*, *entitlements*, and *prohibited* raise the argument to a sophisticated level. There are no grammar mistakes or punctuation errors and only one spelling error (*insures* for *ensures*). Sentence structure is somewhat varied, particularly with the use of dashes in paragraph 5. The phrase "the third point of view is simply ridiculous" begs for more temperate wording, but it does illustrate the author's commitment to her ideas. The tone is appropriately firm and formal for a persuasive essay.

LEVEL 4 ESSAY

Throughout our school lives, parents and teachers emphasize the importance of going to college. Consequently almost all my friends in my high school are planning on going to college. Some will even be the first in their families to have a higher education, or perhaps even finish high school. They will be better educated than their parents, have more opportunities for better and higher-paying jobs, and perhaps be able to contribute something unique to society. However, the cost of a college education, and the need for loans, means that most students will take out loans. Because the loans are for a good cause, and the end result may benefit all of society, these loans should be readily available and interest free.

I know from the home loan my parents have that it's hard to pay loans back every month, so the less money a borrower has to pay every month, the more likely that the loan will eventually be paid in full. When applying that to college loans, the best way to structure them is to not add anything extra, including interest. The added cost of interest means that students will have to pay more, it will take longer and be harder, and some may not be able to do it at all. The education for a doctor, for example, takes many years, each one involving the cost of schooling. Though a doctor may make a great deal of money over time, this won't happen right away, but the loan payments will and it will all add up to perhaps an unpayable debt. The government makes a great deal of money off taxes, and banks make plenty of money from credit cards; it should not be allowed for them to also make money from student loans.

Those who want to base school loans on future earnings are going to run into a lot of problems. As freshmen and sophomores, how can we be sure of what we will do when we graduate from college, so how can loans for the first two years of college be based on future earnings? And what if a person can't find a job

right after school or decides to change his career? Holding a person captive in a career because it's the only way he can make enough money to repay his student loans is unfair to the person and could deprive him from the opportunity to do something else which would benefit society.

Since financial institutions, and the government when it works as one, can get their money back if people actually pay their monthly installments, it makes sense to do what they can to make it easy. Students are borrowing money for something that actually benefits society as a whole. They are not asking for college to be free (although that would be great) but just a fair chance at paying the money they owe without the burden being so much that they can't pay for the necessities of life. If the government and the banks want to get their money back they definitely should make the loans cheaper by not charging interest.

SCORE EXPLANATION (4444)

The writer of this essay remains focused on the issue throughout and develops a clear opinion in the first paragraph. Support is varied, showing some recognition of the complexity of the issue. One alternative perspective is critiqued, followed by reiteration of the author's conclusion. The rhetorical questions in the second paragraph add to the writing quality.

Ideas and Analysis (4)

The author's thesis—loans should be interest-free to enable borrowers to repay them, and banks and the government have no need to add interest—is consistent throughout the essay. The argument recognizes several contexts in which this applies, including children better educated than their parents, the cost of a college education, the burden on the borrower, and not restricting workers to a job simply because they can make enough money to repay the loan. The author analyzes the issue more broadly when discussing the job market, career changes, and possible benefits to society. The author's thoughts are clearly expressed and contribute to a generally persuasive essay.

Development and Support (4)

Though couched primarily in personal terms (“almost all my friends in my high school are planning on going to college”), the author's reasoning moves from the opening statement to her perspective, the reasons supporting it (including benefits to society), critique of an alternative, and her conclusion, showing clear and logical development. She expands on her thesis, emphasizing how interest-free loans make it more likely that the borrower can repay with undue burden, and supports this with reference to her parents' home loan, the length and cost of a doctor's education, taxes, and credit cards. Her critique of the third perspective, though somewhat simplistic, is relevant to the thesis.

Organization (4)

The author's thesis is clear and supported by the introductory comments regarding many students who plan on going to college. The organizational strategy is clear in the progression of the essay, and ideas are grouped logically. The second paragraph expands on the thesis and is cohesive in its development. The writer then reflects on an alternative perspective, but returns to her thesis in the final paragraph, reiterating the benefit of no-interest loans both to the borrower and possibly to society. There are some internal transition words (*consequently*, *however*) and paragraph transition words to help the essay flow better. For the most part, the organization is adequate for a persuasive essay.

Language Use (4)

Word choice is correct but simple, with phrases such as “plenty of money,” “run into lots of problems,” and “make the loans cheaper.” Though overall the grammar and spelling are correct, some sentences are awkwardly phrased (“it should not be allowed for them to also make money from student loans”), and the phrase “end result” is redundant.

Rhetorical questions are well placed and make good points. Overall, word choice is adequate and occasionally above-average with words such as *burden*, *captive*, and *unique*. Tone and style are generally appropriate.

LEVEL 2 ESSAY

Everybody knows that the cheaper something is, the more people can afford to buy it. Getting a loan for college isn't exactly buying something but it ends up being the same thing because it means you have to pay for something. With a loan you don't pay the full price rite away but you do in the long run so its better to have to pay less than more which is what happens if theres no interest on the loan. If you have to get a loan, getting a goverment one without interest is best, but you still have to make a lot of money so you can pay your loan and also have money to live.

Even though its not a choice for the essay, I think a better way to get money for college is to get a scholarship because you dont have to pay that back. People who are good at something like sports, like I am, should be rewarded with a college scholarship. I hope I will get a football scholarship because Im the quarter-back on the varsity football team and were one of the top three teams in the high school division. If I get a football scholaship I can go to college and still play football and I won't have to pay any money for a loan. It doesnt matter if loans have extra money to pay back like interest because all that money is hard to pay back no matter how much it is. So a scholarship is better and thats what I want so I can go to college.

SCORE EXPLANATION (2222)

Though the essay provides some support for the first perspective, the author then goes off-topic and neglects to consider the prompt from any perspective but his own. Though scholarships are available for college tuition, they are irrelevant to the task, thus the writer has neither understood the tasks nor fulfilled them in any way. This essay does not show coherent thinking, writing, or attention to the task.

Ideas and Analysis (2)

The writer gives a passing nod to the prompt with a weak response, which is then abandoned in favor of an off-topic thesis. The majority of the essay is irrelevant, and even the argument in favor of scholarships lacks any analysis or support. Logic is garbled or nonexistent, and no attempt is made to address any alternative perspective for the prompt, though the author does recognize that his perspective is not one of the three given.

Development and Support (2)

There is minimal response to the prompt with no development of ideas. Support is given only in terms of “the cheaper something is.” Even the author’s own claim is weak, consisting of personal opinion only with no support. But for the brief and somewhat incoherent response to the first perspective, this essay would merit a score of 1.

Organization (2)

The entire essay is contained in two paragraphs with no clear introduction or conclusion. The second paragraph is introduced with a contrast transition (“Even though”), and an argument proceeds from there, but since the argument is irrelevant to the prompt, the entire organization of the paragraph is off-topic. The second-to-last sentence somewhat references the task but simply echoes the first paragraph’s contention that it is difficult to pay back a loan. This essay does not show appropriate thinking, writing, or attention to the task.

Language Use (2)

Sentence structure and word choice are simplistic, and there are multiple spelling and punctuation errors (*goverment* for *government*, *scholaship* for *scholarship*, *rite* for *write*). There is a noticeable lack of commas within sentences, and apostrophes are missing from several words. The third sentence is unnecessarily long and should be broken up. The personal and somewhat antagonistic tone and voice are inappropriate for the purpose.

You can evaluate your essay and the model essay based on the following criteria:

- Is the author's own perspective clearly stated?
- Does the body of the essay assess and analyze an additional perspective?
- Is the relevance of each paragraph clear?
- Does the author start a new paragraph for each new idea?
- Is each sentence in a paragraph relevant to the point made in that paragraph?
- Are transitions clear?
- Is the essay easy to read?
- Is it engaging?
- Are sentences varied?
- Is vocabulary used effectively?
- Is college-level vocabulary used?

