



Chapter 20

Practice Test 9: Answers and Explanations

PRACTICE TEST 9 ANSWER KEY

Section 1: Reading		Section 2: Writing & Language		Section 3: Math (No Calculator)		Section 4: Math (Calculator)	
1. A	27. C	1. D	23. D	1. A	11. C	1. D	20. D
2. D	28. B	2. D	24. C	2. C	12. B	2. C	21. C
3. B	29. C	3. A	25. D	3. D	13. A	3. B	22. C
4. A	30. D	4. A	26. A	4. C	14. A	4. D	23. C
5. B	31. D	5. A	27. B	5. D	15. D	5. A	24. B
6. C	32. C	6. C	28. C	6. A	16. $\frac{31}{2}$	6. A	25. A
7. D	33. B	7. B	29. D	7. B	or 15.5	7. D	26. B
8. D	34. C	8. A	30. C	8. B	17. 10	8. C	27. B
9. C	35. A	9. B	31. A	9. D	18. 117	9. D	28. D
10. C	36. D	10. C	32. D	10. A	19. $\frac{12}{5}$	10. A	29. B
11. A	37. B	11. A	33. B		or 2.4	11. B	30. C
12. B	38. C	12. B	34. B		20. 7	12. C	31. $\frac{42}{9}$,
13. D	39. C	13. D	35. D			13. A	$\frac{14}{3}$,
14. D	40. C	14. C	36. B			14. D	4.66,
15. A	41. B	15. D	37. D			15. A	or 4.67
16. B	42. A	16. C	38. A			16. B	32. 63
17. A	43. C	17. B	39. C			17. C	33. 2,560
18. B	44. C	18. C	40. D			18. B	34. 60
19. C	45. B	19. A	41. C			19. C	35. 5
20. C	46. B	20. B	42. D				36. 8
21. C	47. C	21. A	43. D				37. 11
22. A	48. A	22. D	44. C				38. 12.6
23. B	49. A						
24. A	50. D						
25. B	51. C						
26. D	52. A						

Go to [PrincetonReview.com](https://www.PrincetonReview.com) to score your exam. Alternatively, for self-assessment tables, please turn to page 909.

PRACTICE TEST 9 EXPLANATIONS

Section 1: Reading

1. **A** The question asks how *the primary focus shifts over the course of the passage*. Because this is a general question, it should be done after the specific questions. The passage initially focuses on Mrs. Helen Givings' views of Frank and April, saying that *she had recognized them as the kind of couple one did take a little trouble with*, and proceeds to expand on her views of the couple until it *shifts* to describing Frank and April's positive views about the house that *did have possibilities* such that *they could fancy themselves at home here*. Eliminate answer choices that don't match the passage. Keep (A) because it matches the passage. Choice (B) is a Mostly Right/Slightly Wrong trap answer: although the passage does contain *an interaction between Frank and April* toward the end, it does not contain *a monologue by Mrs. Givings*. Eliminate (B). Choice (C) is a Right Answer, Wrong Question trap answer: though the passage does contain a *description of a setting* and an *evaluation of the characters*, neither of these is the *primary focus* of the passage. Eliminate (C). Eliminate (D) because the passage does not discuss *tragic past events*. The correct answer is (A).
2. **D** The question asks for *the main purpose of the first paragraph*. Because this is a general question, it should be done after the specific questions. The first paragraph describes Frank and April's drive *down to the turn at the base of Revolutionary Hill and on up the winding blacktop grade of Revolutionary Road*, the location that gives the novel its name and is discussed later in the passage. Eliminate answer choices that do not match the passage. Choice (A) is a Mostly Right/Slightly Wrong trap answer: although the first paragraph does *establish a mood*, that mood is not *maintained throughout the passage*. Eliminate (A). Choice (B) is a Right Words, Wrong Meaning trap answer: though the first paragraph does use *descriptive imagery* to describe the couple as *like very old and tired people*, this phrase is used figuratively, rather than literally. Eliminate (B). Eliminate (C) because the rest of the passage does not *explain the circumstances* of the first paragraph. Keep (D) because it matches the passage. The correct answer is (D).
3. **B** The question asks for *Mrs. Givings's primary impression of her "cordially nodding passengers."* The question is the first question in a paired set, but it is easy to find, so it can be done on its own. Use the given line reference to find the window. Lines 10–16 state that Mrs. Givings, after initially being *polite but guarded* since *so many city people were apt to come out and waste her time*, eventually recognized her passengers as *the kind of couple one did take a little trouble with*. Eliminate answer choices that don't match this answer from the passage. Choice (A) is a Right Answer, Wrong Question trap answer: Mrs. Givings does indicate that *many city people...waste her time demanding impossible bargains*, but she does not describe Frank and April this way. Eliminate (A). Keep (B) because it matches the passage. Eliminate (C) because the passage does not say that Frank and April *remind Mrs. Givings of herself and her husband*. Choice (D) is a Right Words, Wrong Meaning trap answer: though Mrs. Givings describes the house she believes Frank and April are looking for as *something with a little charm*, the passage does not describe the couple themselves as projecting *sophistication and charm*. Eliminate (D). The correct answer is (B).
4. **A** The question is the best evidence question in a paired set. Because the previous question was easy to find, simply look at the lines used to answer Q3. Lines 14–16 provided the evidence for Q3: *she had recognized them as the kind of couple one did take a little trouble with, even in the low-price bracket*. Eliminate (B), (C), and (D). The correct answer is (A).

5. **B** The question asks about the *contrast emphasized* by Mrs. Givings while *describing Revolutionary Hill Estates*. Since there is no line reference, use lead words and the order of the questions to find the window. The evidence for Q3 and Q4 came from lines 10–16, so scan the passage beginning with line 16, looking for the lead words *Mrs. Givings* and *Revolutionary Hill Estates*. Starting at line 38, Mrs. Givings describes *a perfectly dreadful new development called Revolutionary Hill Estates – great hulking split levels, all in the most nauseous pastels and dreadfully expensive too*, but then states that the house Frank and April will be shown *has absolutely no connection with that*, instead describing its appearance as *a sweet little house and a sweet little setting with simple, clean lines and good lawns*. Mrs. Givings is contrasting the appearance of this house with the appearance of nearby houses in *Revolutionary Hill Estates*. Eliminate answer choices that don't match this answer from the passage. Eliminate (A) because the passage does not mention *houses in other towns*. Keep (B) because it matches the passage. Choice (C) is a Right Words, Wrong Meaning trap answer: although Mrs. Givings describes the *Revolutionary Hill Estates* as *dreadfully expensive*, she doesn't mention the *affordability* of another home, nor does she describe a home's *luxury*. Choice (D) is a Right Words, Wrong Meaning trap answer. Though the passage does mention *plumbers, carpenters, little people of that sort*, it does not contrast their *lifestyles* to those of *her more affluent clients*. Eliminate (D). The correct answer is (B).
6. **C** The question asks for evidence that supports the *conclusion that Mrs. Givings prefers older homes*. Look at the line references given in the answer choices, and eliminate the statements that don't support this claim. The lines for (A) say that Mrs. Givings thinks that *Route Twelve* isn't a *very desirable road*, but the lines don't mention *old homes*, so eliminate (A). In the lines for (B), Mrs. Givings describes the homes on Route Twelve as *little cinderblocky, pickup-trucky places*. There is no mention of *old homes*, so eliminate (B). In the lines for (C), Mrs. Givings says, *One of our nice little local builders put it up right after the war, you see, before all the really awful building began*. These lines compare an older home *put up right after the war* to the new *really awful building*, which supports the idea that Mrs. Givings prefers older homes. Keep (C). The lines for (D) say that the *road is nicer along here*, but there is no mention of *homes*, so eliminate (D). The correct answer is (C).
7. **D** The question asks how *Frank and April find the “central window.”* Use the given line reference to find the window for the question. Lines 55–56 describe *its outsized central window staring like a big black mirror*. In lines 57–59, April says, *Of course it does have the picture window; I guess there's no escaping that*, and in lines 60–62, Frank says, *Still, I don't suppose one picture window is necessarily going to destroy our personalities*. Eliminate answer choices that don't match this answer from the passage. Eliminate (A) because the reaction to the central window is not positive. Eliminate (B) because Frank and April don't disagree about the window. Choice (C) is a Right Answer, Wrong Question trap: the passage describes the *living room* as *too-symmetrical* but *undeniably appealing*, but this description doesn't refer to the *central window*. Keep (D) because *out of proportion* matches *outsized*. The correct answer is (D).
8. **D** The question asks for the *primary impression created by the narrator's description of Mrs. Givings in lines 63–68*. Use the given line reference to find the window. Lines 64–67 say that Mrs. Givings's *laughter enclosed them in a warm shelter of flattery and she hovered near them, reassuring and protective*. Eliminate answer choices that don't match this answer from the text. Eliminate (A) because *formal* does not match her *laughter*. Eliminate (B) because there is no indication that Mrs. Givings is *amusing*. Eliminate (C) because Mrs. Givings is not *compulsive*. Keep (D) because it matches the passage: *doting and attentive* match *reassuring and protective*. The correct answer is (D).

9. **C** The question asks what the word *fancy* most nearly means in line 80. Go back to the text, find the word *fancy*, and cross it out. Then read the window carefully, using context clues to determine another word that would fit in its place. The text says, *Enjoying the light heft and feel of these doorknobs, they could fancy themselves at home here.* Therefore, *fancy* could be replaced by a word such as “imagine.” Eliminate answer choices that don’t match the way the word is used in context. *Elaborate* means “develop in detail;” it doesn’t match “imagine,” so eliminate (A). *Embellish* means “add decorative detail;” it doesn’t match “imagine,” so eliminate (B). *Envision* matches “imagine,” so keep (C). *Enshrine* means “put in a place to protect and show respect;” it doesn’t match “imagine,” so eliminate (D). Note that (A) and (B) are Could Be True trap answers based on another meaning of *fancy* that is not supported by the text. The correct answer is (C).
10. **C** The question asks for the *main idea of the last paragraph*. Use the given paragraph reference to find the window. The paragraph describes Frank and April’s thoughts about the house. Lines 68–69 say, *The place did have possibilities* and line 80 says, *they could fancy themselves at home here.* Eliminate answer choices that don’t match this answer from the text. Choice (A) is a Right Answer, Wrong Question trap: *furniture* is mentioned, but it is not the main idea. Eliminate (A). Choice (B) is also a Right Answer, Wrong Question trap: the new house is *symmetrical*, but that is not the main idea. Eliminate (B). Keep (C) because the statement *Frank and April can imagine living* in the new house matches the statement *they could fancy themselves at home here.* Choice (D) is a Right Answer, Wrong Question trap: although there are some things about the house that Frank and April don’t like, (the *picture window*, for example) as well as things they do like, the main idea of the paragraph is not that they feel ambivalent (which means “having mixed feelings”) about the house. The final sentence of the paragraph emphasizes their positive feelings about it: *Who could be frightened in as wide and bright, as clean and quiet a house as this?* Eliminate (D). The correct answer is (C).
11. **A** The question asks how the main focus of the passage shifts. Because this is a general question, it should be done after all the specific questions. The authors evaluate the evidence for whether Groupon users are more critical in their reviews than non-Groupon users, and then suggest some hypotheses about why Groupon reviews yield lower ratings. Choice (A) summarizes this shift, so keep (A). Eliminate (B) because the original observation was that *Yelp reviews that contained the word “Groupon” provided, on average, significantly lower ratings than reviews that did not.* The authors do not discuss the method used to detect this. Choice (C) can be eliminated because the passage provides no review of the research itself. Eliminate (D) because the authors conclude that there are a number of reasons that combine to create the Groupon effect. Hence, there is no *absolute* reason. Note, too, that the word *absolute* is an extreme word that does not have similarly extreme support in the text. The correct answer is (A).
12. **B** The question asks how the *Groupon effect* may be defined. Notice that this is the first question in a paired set, so this question can be done in tandem with Q13. Look at the best evidence answer choices for Q13 first. The lines for (13A) state that by looking at a dataset from Groupon and Yelp, the authors learned *significantly more about the daily deals model.* These lines do not describe the Groupon effect and do not support any of the answers in Q12. Eliminate (13A). The lines for (13B) state that in some cases, businesses *may also attempt to place negative reviews for their competitors.* These lines support (12C), but that pair does not answer the question and can ultimately be eliminated. The lines for (13C) describe *unrealized expectations between reviewers and merchants.* This does not support any of the answers in Q12. Eliminate (13C). The lines for (13D) state that the authors have *shown that a combination of poor business behavior, Groupon user experimentation, and an artificially high baseline all play a role* in describing the Groupon effect. This supports (12B). Connect answers (13D) and (12B). The correct answers are (12B) and (13D).

13. **D** (See explanation above.)
14. **D** The question asks what the word *fake* means in line 53. Go back to the text, find the word *fake*, and mark it out. Carefully read the surrounding text to determine another word that would fit in the blank based on the context of the passage. The word *fake* in the passage is used in the context of a review being introduced *in an arguably artificial manner*. Look for an answer that means something like “being introduced in an artificial manner.” Only (D), *planted*, has that meaning. To “plant information” means “to secretly place the information for publication or dissemination.” Choices (A), (B), and (C) may all seem tempting because all of these answers relate to a definition of the word *fake*. However, none of these answers relate to introducing a review *in an arguably artificial manner*. The correct answer is (D).
15. **A** The question asks about an action which would *best address a concern regarding the introduction of artificial Yelp reviews*. Use the lead word *artificial* and chronology to find the window and read carefully. The passage states that reviews that mention Groupon are written by actual customers, while other reviews *are significantly more likely to be “fake” or otherwise introduced in an arguably artificial manner*. Therefore, the problem is that not all reviews are being written by actual customers who use the service. Find an answer that addresses this concern. Choice (A) addresses the concern. If a *verifiable receipt image* were required, the reviews would be entirely submitted by customers who used the service. None of the other answers would help ensure that only those who had used the services could write reviews. The correct answer is (A).
16. **B** The question asks which choice best describes the “*unrealized expectations*” between reviewers and merchants. Carefully read each line reference in the answer choices and eliminate any that don’t address the question. The correct answer should mention both the reviewers and the merchants. The lines for (A) describe the research methodology the author used. This information is unrelated to the *unrealized expectations* between reviewers and merchants. The lines for (B) describe Groupon users as *fussy reviewers* and businesses as *providing worse service specifically to Groupon customers*. This describes a mismatch between reviewers and merchants. Keep (B). The lines for (C) describe how businesses attempt to gain more positive reviews. However, these lines say nothing about the reviewers themselves. Eliminate (C). The lines for (D) state that *Groupon users provide detailed reviews that are valued more highly by their Yelp peers*. However, this answer provides no information about the merchants. Eliminate (D). The correct answer is (B).
17. **A** The question asks what the word *compilation* means in line 86. Go back to the text, find the word *compilation*, and mark it out. Carefully read the surrounding text to determine another word that would fit in the blank based on the context of the passage. The word describes a group of data about Groupon users. Look for an answer choice that means “a group.” Only (A), *collection*, means a group. Choice (B), *summary*, may seem tempting. However, while the data has been collected, it is not clear from the passage that it has been summarized. The correct answer is (A).
18. **B** The question asks *which category of Yelp user showed the most evenly distributed star ratings*, according to the figure. In the figure, the *x*-axis shows the star rating and the *y*-axis shows the frequency of any given star rating. The user group with the flattest line is the one with the most evenly distributed star ratings. The flattest relative line in the graph belongs to the Groupon Businesses, Groupon User, Mentions Groupon, which is (B). The correct answer is (B).
19. **C** The question asks which Yelp rating a non-Groupon user is most likely to give. Look at the two lines for non-Groupon businesses. Both lines for the non-Groupon business users peak at 4 stars. The correct answer is (C).

20. **C** The question asks what idea from the passage is most directly supported from the passage. The data in the figure provides no information on the correlation between the type of business and the pattern of Yelp star ratings. Eliminate (A). The data in the figure provides no information on customers who produce “spam reviews.” Eliminate (B). The data in the figure provides no information on the number of Groupon mentions in a review. Eliminate (D). The only answer that can be deduced from the figure is (C). The figure shows Yelp scores of Groupon users relative to Yelp scores of non-Groupon users. The correct answer is (C).
21. **C** The question asks what the word *extend* means in line 3. Go back to the text, find the word *extend*, and mark it out. Carefully read the surrounding text to determine another word that would fit in the blank based on the context of the passage. The word *extend* refers to the statement in the previous sentence that *We know that clinical trials sponsored by the pharmaceutical industry are likely to exaggerate benefit and minimize harms related to their sponsorship of non-human animal research.* So *extend* should mean something like “relate.” *Reach*, *require*, and *stretch* do not mean “relate,” so eliminate (A), (B), and (D). *Apply* means “to make relevant,” which matches the prediction. The correct answer is (C).
22. **A** The question asks what the questions posed in lines 3–7 chiefly intend to do. Read the window to find that the questions, *do these biases extend to their sponsorship of non-human animal research? Are the findings of such studies credible? And how do those findings compare with “proper” research conducted by dispassionate academics?*, are asked before being described as *important questions* to begin the second paragraph. The questions intend to show what type of information could be determined by the proposed investigation of pharmaceutical clinical trials. *Introduce a set of considerations that may not have been investigated in prior research* matches the prediction, so keep (A). There is no reference to *confusion about the nature of results*, *an improper method of conducting trials*, or *controversy about the quality of research performed by academics*; eliminate (B), (C), and (D). The correct answer is (A).
23. **B** The question asks which question *the research of Bero’s team* primarily intended to answer. Notice that this is the first question in a paired set, so this question can be done in tandem with Q24. Look at the best evidence answer choices for Q24 first. The lines for (24A) ask *could it be that industry-sponsored research is actually more rigorous than academic research?* This matches whether *experiments funded by invested corporations get performed with a greater level of attention to detail than those that are not*, so connect (24A) with (23B). The lines for (24B) and (24C) discuss statins, so they might initially seem to connect to (23A), but neither set of lines actually answers the question in (23A). Eliminate (24B) and (24C). The lines for (24D) address *the difficulty industry has in replicating the results of research conducted in academic labs*, but there is no indication that something explicitly *prevents industry-sponsored research from being conducted with the same level of rigor as academic research* in (23C); eliminate (24D). The correct answers are (23B) and (24A).
24. **A** (See explanation above.)
25. **B** The question asks about the *main purpose of the fourth paragraph*. The fourth paragraph describes the systematic review of statin treatments for atheroma, *focusing on those studies where sponsorship status was known* before presenting the results of the studies. So the main purpose of the fourth paragraph is to show the results of the studies of sponsorship status. The fourth paragraph does not *question the implications of the surprising findings*, *shift from a description of Bero’s team’s study to an overview of a question*, or *connect research performed on human subjects to research performed on non-human animals*, so eliminate (A), (C), and (D). *Note significant results of Bero’s team’s study* matches the prediction. The correct answer is (B).

26. **D** The question asks what the word *conservative* means in line 48. Go back to the text, find the word *conservative*, and mark it out. Carefully read the surrounding text to determine another word that would fit in the blank based on the context of the passage. The study in the previous paragraph shows *that findings from research sponsored by industry are more conservative than those sponsored by non-industry sources, but the interpretation of those data is, in contrast, less conservative*. Additionally, in the previous paragraph, industry-supported studies find less evidence supporting the use of statins, but are more likely to ultimately favor their use. So *conservative* means something like “reserved in interpretation.” Because *old-fashioned*, *dramatic*, and *traditional* do not mean “reserved in interpretation,” eliminate (A), (B), and (C). *Reserved* matches the prediction. The correct answer is (D).
27. **C** The question asks about *non-human research sponsored by others compared to non-human animal research sponsored by industry*. The author states in the sixth paragraph that *non-human animal work sponsored by industry is likely to be performed and reported to a higher quality, and to be at lower risk of bias, than work sponsored by others*. Subsequently, the passage mentions *the difficulty industry has in replicating the results of research conducted in academic labs*. Find an answer choice that matches the information from the text. *Non-human research sponsored by others shows a lower risk of bias* reverses this relationship, so eliminate (A). Choice (B) might initially look attractive because the passage does talk about research that is easier to reproduce, but read the question carefully. The question asks about *non-human research sponsored by others*, which the passage says industry has *difficulty replicating*. Eliminate (B). Choice (C) is directly supported by the passage, so keep that answer. There is no comparison of the *costs*, so (D) can be eliminated. The correct answer is (C).
28. **B** The question asks why *the findings of Bero’s team are surprising*. Notice that this is the first question in a paired set, so this question can be done in tandem with Q29. Look at the best evidence answer choices for Q29 first. The lines for (29A) and (29B) provide the study results alone without any indication as to why they *are surprising*, so eliminate (29A) and (29B). The lines for (29C) indicate that *findings from research sponsored by industry are more conservative than those sponsored by non-industry sources, but the interpretation of those data is, in contrast, less conservative*, before asking *why might this be?* This contradiction indicates the findings are surprising and *apparently contradict a sensible assumption*, so connect (29C) with (28B). The lines for (29D) reference *exaggeration of conclusions*, but this doesn’t match any of the choices for Q28; eliminate (29D). The correct answers are (28B) and (29C).
29. **C** (See explanation above.)
30. **D** The question asks why the author of the passage would most likely agree that *industry-sponsored research may be rigorous*. Notice that this is the first question in a paired set, so this question can be done in tandem with Q31. Look at the best evidence answer choices for Q31 first. The lines for (31A), (31B), and (31C) make no reference to the level of rigor with which *industry-sponsored research* is conducted; eliminate (31A), (31B), and (31C). *Standards for internal reporting* would refer to the rigor with which *non-human animal research* is conducted by industry and matches *elements of documentation that are also applied to purposes other than research*. The correct answers are (30D) and (31D).
31. **D** (See explanation above.)
32. **C** The question asks what point Hubert makes about *working women relative to working men*. Notice that this is the first question in a paired set, so this question can be done in tandem with Q33. Look at the best evidence answer choices for Q33 first. The lines for (33A) state that *women are paid less than men for apparently the same service which seems to disturb a great many people*

who find here a conspiracy upon the part of the man to keep women out of the wage-earning field. This supports none of the answers in Q32. It may be tempting to connect this answer with (32A) because (32A) includes both the words *disturbingly* and *conspiracies*. However, the passage does not state that women *supply more conspiracies than men*. Eliminate (33A). The lines for (33B) state that *women as a class of workers are beginners, comparatively speaking in the great field of industry...Woman's preparation for work is seldom so thorough as with a man, and long technical training for any work is considered superfluous for a woman...* This supports (32C). Connect answers (33B) and (32C). The lines for (33C) state that *the woman has seldom the strong incentive of others dependent upon her; the man has a wife and children who will suffer, should he relax his efforts; the woman is usually alone*. This answer supports none of the answers in Q32. Eliminate (33C). The lines for (33D) state that *while in this century and in America work and money-earning have always been considered to be proper in every way for men, there is still some slight social stigma pertaining to money-getting by women*. This supports none of the answers in Q32. Eliminate (33D). The correct answers are (32C) and (33B).

33. **B** (See explanation above.)
34. **C** The question asks what Hubert implies about the *wage gap between women and men*. Scan the passage for where the author discusses the wage gap. The second paragraph discusses the *reasons for the apparent discrepancy between the pay of men and women*. Use the second paragraph as the window to read. According to the second paragraph, *some reasons for the apparent discrepancy between the pay of men and women...may serve to clear away some of the false impressions that have grown up about this question. In the first place, women as a class of workers are beginners comparatively speaking, in the great field of industry; they lack the hereditary instinct for such work, and as beginners their wages are low*. Find an answer that is consistent with this prediction. Choice (A) can be eliminated because at no point in the passage does the author suggest that the wage gap is *inevitable*. In fact, the first paragraph states that *If a woman wants more money than a man, she has only to do better and more work in the long run than the man*. In other words, the author does not preclude a woman from earning as much as a man. Choice (B) can be eliminated because the passage does not indicate that the reason the wage gap is *avoidable* is because *women and men can either support themselves or marry*. Choice (C) matches the prediction. The author states that there are *false impressions* about the apparent discrepancy between the pay of men and women, and that women get paid less because they are *beginners*. The implication is that one gets paid more if one has more experience. Eliminate (D) because the author never indicates that he finds the wage gap *regrettable*. The correct answer is (C).
35. **A** The question asks what the word *relax* means in line 28. Go back to the text, find the word *relax*, and mark it out. Carefully read the surrounding text to determine another word that would fit in the blank based on the context of the passage. The word *relax* is used in the sentence that states *the man has a wife and children who will suffer, should he relax his efforts*. Within the context of the passage *relax his efforts* means something like “reducing” the amount of work he does. Find an answer that has a meaning close to “reduce.” Choice (A), *lessen*, is the only answer that means “to reduce.” Choices (B), *chill*, and (D), *calm*, may seem tempting because they are alternate definitions of the word *relax*. However, given that *relax* is used in this passage as meaning to “reduce effort”, these answers do not work in context. The correct answer is (A).
36. **D** The question asks what the word *curious* means in line 30. Go back to the text, find the word *curious*, and mark it out. Carefully read the surrounding text to determine another word that would fit in the blank based on the context of the passage. The word *curious* is used to describe a feature of *work by women*. The sentence states that *while in this century and in America work and money-earning have always been considered to be proper in every way for men, there is still some*

slight social stigma pertaining to money-getting by women. In context, the word *curious* means “odd.” It is odd that it is proper for men to make money by working, but not proper for women to do so. The only answer that means something similar to odd is (D), *peculiar*. Choice (A), *interested*, may seem tempting because that is a definition of *curious*, however, it does not work in the context of the sentence. The correct answer is (D).

37. **B** The question asks what Penny’s *central claim* is in Passage 2. Because this is a general question, it should be done after all of the specific questions for Passage 2. In the first paragraph, the author notes that *a woman...receives half price for all she does*. In the second paragraph, the author goes on to state that *it requires just as much to support a woman as a man*, and that when women are employed *they have the hardest, worst paid, and most unhealthy work*. The passage concludes with the author stating that the effect of paying women better *will prove beneficial not only to workers...but its influence will extend to all those directly affected*. Choice (A) can be eliminated because at no point in the passage does the author suggest that *women must protest*. Choice (B) is consistent with the prediction since the central claim of the passage is that women should get paid more. Choice (C) may be tempting because the first paragraph states that *a woman may be defined to be one who receives half price for all she does, and pays full price for all she needs*. However, the author does not state that women shouldn’t pay full price. The central claim of the passage is that women should be paid more. Choice (D) can be eliminated because there is no call in the passage for changing *societies that underpay women*. The correct answer is (B).

38. **C** The question asks what point Penny makes about *women’s working conditions* in Passage 2. This is the first question in a paired set, so this question can be done in tandem with the second question. Notice that this is a general question about both passages, it should be done after the questions that pertain to each individual passage have been completed. Passage 1 describes the reasons that women are paid less than men. Passage 2 argues that women should get paid the same as men. Find an answer that connects the two passages. Choice (A) connects the two passages by stating that women should be paid the same as men, but it is not supported by the passages. Choice (B) can be eliminated because the passages do not discuss *the reasons for the discrepancies in the wages between men and women*. Choice (C) matches the passages: Passage 1 discusses the reasons for the discrepancies in the wages between men and women. Choice (D) can be eliminated because although Passage 1 provides reasons for why women should get paid more, which if it came to pass would lessen the discrepancy, Passage 2 argues that women do not get paid as much as men, Passage 2 does not address these reasons. The correct answer is (C).

39. **C** (See explanation above.)

40. **C** The question asks what both authors would agree on. Because this is a general question about both passages, it should be done after the questions that pertain to each individual passage have been completed. Passage 1 describes the reasons that women are paid less than men. Passage 2 argues that women should get paid the same as men. Find an answer that connects the two passages. Choice (A) connects the two passages by stating that women should be paid the same as men, but it is not supported by the passages. Choice (B) can be eliminated because the passages do not discuss *the reasons for the discrepancies in the wages between men and women*. Choice (C) matches the passages: Passage 1 discusses the reasons for the discrepancies in the wages between men and women. Choice (D) can be eliminated because although Passage 1 provides reasons for why women should get paid more, which if it came to pass would lessen the discrepancy, Passage 2 argues that women do not get paid as much as men, Passage 2 does not address these reasons. The correct answer is (C).

41. **B** The question asks what both authors would agree on. Because this is a general question about both passages, it should be done after the questions that pertain to each individual passage have been completed. Passage 1 describes the reasons that women are paid less than men. Passage 2 argues that women should get paid the same as men. Find an answer that connects the two passages. Choice (A) connects the two passages by stating that women should be paid the same as men, but it is not supported by the passages. Choice (B) matches the passages: Passage 1 discusses the reasons for the discrepancies in the wages between men and women. Choice (C) can be eliminated because although Passage 1 provides reasons for why women should get paid more, which if it came to pass would lessen the discrepancy, Passage 2 argues that women do not get paid as much as men, Passage 2 does not address these reasons. The correct answer is (B).

should be done after all of the specific questions for Passage 2. In the first paragraph, the author notes that *a woman...receives half price for all she does*. In the second paragraph, the author goes on to state that *it requires just as much to support a woman as a man*, and that when women are employed *they have the hardest, worst paid, and most unhealthy work*. The passage concludes with the author stating that the effect of paying women better *will prove beneficial not only to workers...but its influence will extend to all those directly affected*. Choice (A) can be eliminated because at no point in the passage does the author suggest that *women must protest*. Choice (B) is consistent with the prediction since the central claim of the passage is that women should get paid more. Choice (C) may be tempting because the first paragraph states that *a woman may be defined to be one who receives half price for all she does, and pays full price for all she needs*. However, the author does not state that women shouldn’t pay full price. The central claim of the passage is that women should be paid more. Choice (D) can be eliminated because there is no call in the passage for changing *societies that underpay women*. The correct answer is (B).

38. **C** The question asks what point Penny makes about *women’s working conditions* in Passage 2. This is the first question in a paired set, so this question can be done in tandem with the second question. Notice that this is a general question about both passages, it should be done after the questions that pertain to each individual passage have been completed. Passage 1 describes the reasons that women are paid less than men. Passage 2 argues that women should get paid the same as men. Find an answer that connects the two passages. Choice (A) connects the two passages by stating that women should be paid the same as men, but it is not supported by the passages. Choice (B) can be eliminated because the passages do not discuss *the reasons for the discrepancies in the wages between men and women*. Choice (C) matches the passages: Passage 1 discusses the reasons for the discrepancies in the wages between men and women. Choice (D) can be eliminated because although Passage 1 provides reasons for why women should get paid more, which if it came to pass would lessen the discrepancy, Passage 2 argues that women do not get paid as much as men, Passage 2 does not address these reasons. The correct answer is (C).

39. **C** (See explanation above.)

40. **C** The question asks what both authors would agree on. Because this is a general question about both passages, it should be done after the questions that pertain to each individual passage have been completed. Passage 1 describes the reasons that women are paid less than men. Passage 2 argues that women should get paid the same as men. Find an answer that connects the two passages. Choice (A) connects the two passages by stating that women should be paid the same as men, but it is not supported by the passages. Choice (B) can be eliminated because the passages do not discuss *the reasons for the discrepancies in the wages between men and women*. Choice (C) matches the passages: Passage 1 discusses the reasons for the discrepancies in the wages between men and women. Choice (D) can be eliminated because although Passage 1 provides reasons for why women should get paid more, which if it came to pass would lessen the discrepancy, Passage 2 argues that women do not get paid as much as men, Passage 2 does not address these reasons. The correct answer is (C).

41. **B** The question asks what both authors would agree on. Because this is a general question about both passages, it should be done after the questions that pertain to each individual passage have been completed. Passage 1 describes the reasons that women are paid less than men. Passage 2 argues that women should get paid the same as men. Find an answer that connects the two passages. Choice (A) connects the two passages by stating that women should be paid the same as men, but it is not supported by the passages. Choice (B) matches the passages: Passage 1 discusses the reasons for the discrepancies in the wages between men and women. Choice (C) can be eliminated because although Passage 1 provides reasons for why women should get paid more, which if it came to pass would lessen the discrepancy, Passage 2 argues that women do not get paid as much as men, Passage 2 does not address these reasons. The correct answer is (B).

of Passage 1 does not state that businesses *overwork* women. For this reason, eliminate (A). The authors of both passages agree that there is a real *wage gap* between men and women. For this reason, eliminate (C). Neither passage discusses whether educated *women should earn higher salaries*. For this reason, eliminate (D). The correct answer is (B).

42. **A** The question asks how the author of Passage 1 would most likely have reacted to lines 72–73 of Passage 2. Because this question is about both passages, it should be done after the questions that pertain to each individual passage have been completed. According to the author of Passage 1, there are a number of valid reasons that women do not get paid as much as men. These include that *women as a class of workers are beginners*; that *woman's preparation for work is seldom so thorough as with a man*; and that *the woman has seldom the strong incentive of others dependent on her* that a man does. Therefore, the author would not agree with the statement that *pay[ing] women better prices for labor will give it a dignity in public estimation*. Eliminate (C) and (D) because *empathy* and *elation* would suggest that the author of Passage 1 agrees with the author of Passage 2. In (B), *panic* is too extreme. The author of Passage 1 does not indicate that he is in any way panicked. Choice (B) is also incorrect since neither passage discusses reverse discrimination. The correct answer is (A).
43. **C** The question asks for *one advantage of acquiring water from traditional sources*. Since there is no line reference, use lead words and the order of the questions to find the window. Q44 asks about line 26, so scan the first two paragraphs, looking for the lead words *traditional sources*. Lines 13–17 say, *relying on traditional sources of water... has served most of the world well. This has become even easier to do for many regions in the world that are experiencing higher rates of precipitation*. Eliminate answer choices that don't match this answer from the passage. Eliminate (A) because the *quality* of the water is not discussed in the window. Choice (B) is a Right Words, Wrong Meaning trap answer: the passage says *most of the world*, not all of the *global demand*. Keep (C) because it matches the passage: *readily accessible* is consistent with *even easier to do for many regions in the world*. Eliminate (D) because *desalination plants* are not mentioned in this part of the passage. The correct answer is (C).
44. **C** The question asks what the word *stable* most nearly means in line 26. Go back to the text, find the word *stable*, and cross it out. Then read the window carefully, using context clues to determine another word that would fit in its place. The text says, *All this added moisture, combined with longer growing seasons owing to higher average yearly temperatures, might seem to contribute to a more stable food supply as well*. Therefore, *stable* could be replaced by a word such as “secure.” Eliminate answer choices that don't match the way the word is used in context. *Balanced* does not match “secure,” so eliminate (A). *Rational* does not match “secure,” so eliminate (B). *Dependable* matches “secure,” so keep (C). *Fixed* does not match “secure,” so eliminate (D). Note that (A), (B), and (D) are Could Be True trap answers based on other meanings of *stable* that are not supported by the text. The correct answer is (C).
45. **B** The question asks what *best reflects the perspective of the “advocates” on traditional water sources*. This is the first question in a paired set, but it is easy to find, so it can be done on its own. Use the given line reference to find the window. According to lines 27–32 the *advocates of desalination* view traditional water sources as *unstable sources of natural water*. Lines 34–37 say that the advocates *cite a recent study concluding that, by 2071, half of the 204 freshwater basins in the United States may be unable to meet demands*. Eliminate answer choices that don't match this answer from the passage. Choice (A) is a Right Answer, Wrong Question trap: the first paragraph describes traditional water sources this way, but the *advocates* in the third paragraph view *traditional water sources* in a negative way. Keep (B) because it matches the passage: *not reliable* is consistent with *unstable*. Eliminate (C) because the *advocates* view the *traditional water sources*

- as *unstable*; they don't think these sources provide a *stable supply* even *temporarily*. Eliminate (D) because there is no mention of *cost* in the window. The correct answer is (B).
46. **B** The question is the best evidence question in a paired set. Because the previous question was easy to find, simply look at the lines used to answer Q45. Lines 28–37 provided the evidence for Q45: *They have embraced desalination as a godsend that is better for the species—making drinkable the vast amounts of saltwater encircling the globe—than depending on what they view as unstable sources of natural water and by 2071, half of the 204 freshwater basins in the United States may be unable to meet demands.* Of the answer choices for Q46, only (B) includes any of these lines. Eliminate (A), (C), and (D). The correct answer is (B).
47. **C** The question asks what *the Advisian Worley Group* indicates about *the desalination process*. Use the given line reference to find the window. Lines 51–53 mention the *Advisian Worley Group* and how it *analyzed the various factors that contribute to the expense of these desalination plants*, and lines 59–61 say that the *report advised that it was nearly impossible to make predictions about future costs of desalination*. Eliminate answer choices that don't match this answer from the passage. Eliminate (A) because the window does not mention *the amount of water supplied* or *local demand*. Eliminate (B) because there is no mention of *quality of equipment*. Keep (C) because it matches the passage: *unforeseen investments* is consistent with *impossible to make predictions about future costs*. Choice (D) is a Right Words, Wrong Meaning trap answer: although the passage does mention *plant location*, it does not say that plant location is the primary factor for determining cost, just one of the factors. Eliminate (D). The correct answer is (C).
48. **A** The question asks what the word *raw* most nearly means in line 57. Go back to the text, find the word *raw*, and cross it out. Then read the window carefully, using context clues to determine another word that would fit in its place. The text discusses factors that impact the cost of desalination: *Other factors that need to be considered include the location of the plants, the raw water quality, the type of intake and outfall, and others.* Therefore, *raw* could be replaced by a word such as “untreated.” Eliminate answer choices that don't match the way the word is used in context. *Unprocessed* matches “untreated,” so keep (A). *Inexperienced* does not match “untreated,” so eliminate (B). *Unchecked* means “free,” which does not match “untreated,” so eliminate (C). *Underdone* does not match “untreated,” so eliminate (D). Note that (B), (C), and (D) are Could Be True trap answers based on other meanings of *raw* that are not supported by the text. The correct answer is (A).
49. **A** The question asks about the relationship between *traditional sources of water and desalination* as presented in the passage. This is the first question in a paired set, so it can be done in tandem with Q50. Look at the answer choices for Q50 first, reading with the question in mind. The lines for (50A) say that *nobody would disagree that clean drinking water is essential*. These lines do not refer to *traditional water sources* or *desalination*, so eliminate (50A). The lines for (50B) say, *Furthermore, because of the complexity of the variables, the report advised that it was nearly impossible to make predictions about future costs of desalination*. While these lines mention *desalination*, there is no discussion of its relationship to *traditional water sources*; eliminate (50B). The lines for (50C) say, *Flooding that accompanies once-in-a-century climate events—which are now occurring much more often than that—pollutes watersheds*. Since there is no mention of *traditional water sources* or *desalination*, eliminate (50C). The lines for (50D) say, *While desalination is more consistent, its cost and relatively small output leads us to conclude that it will be difficult to ever rely fully upon it*. These lines discuss *desalination* as compared to *traditional water sources*. Check the answer choices for Q49 to see whether any of the choices are supported by these lines. These lines support (49A). Draw a line connecting (49A) and (50D). Without any support in the answer choices from Q50, (49B), (49C), and (49D) can be eliminated. The correct answers are (49A) and (50D).

50. **D** (See explanation above.)
51. **C** The question asks *which statement about reverse osmosis desalination capacity in 2013 is best supported by the information in figure 2*. Work through each answer choice using the figure. Eliminate (A) because *seawater* yielded 46.3% of the water for reverse osmosis desalination, not 46.3 million cubic meters. This answer choice is a trap based on mixing up the desalination capacity of seawater (measured in millions of cubic meters per day) with the percentage of the source water for desalination that comes from seawater. Eliminate (B) because *wastewater* provided 2.9 million cubic meters of water per day while *brine* provided only 0.09 million cubic meters of water per day, so the desalination capacity of wastewater was greater. Keep (C) because *seawater* was the source that provided the most water through desalination. Eliminate (D) because *tap water* and *pure water* together provide 2.6 million cubic meters of water per day, which is 6.5% of the capacity. This answer choice is a trap based on mixing up the desalination capacity of tap or pure water with the percentage of the source water for desalination that comes from tap or pure water. The correct answer is (C).
52. **A** The question asks which claim *is supported by figure 1*. Work through each answer choice using the figure. Keep (A) because the figure does show steady growth of desalination. Furthermore, the fact that *desalination capacity* is greater *than operational desalination capacity* indicates that *desalination is not running at its full capacity*. Eliminate (B) because *operational desalination capacity*—which is represented by the solid line and shown on the left vertical axis—was a little less than 100 million m³/day in 2020. This answer choice is a trap based on mixing up the *desalination capacity* with the *number of desalination plants*, which is shown on the right vertical axis. Eliminate (C) because the number of *operational desalination plants*—which is represented by the light grey bar and shown on the right vertical axis—was well over 40 before 2005; in 2000 the number of *operational desalination plants* was over 5,000. This answer choice is a trap based on mixing up the *desalination capacity* (shown on the left axis) with the *number of desalination plants* (shown on the right axis). Eliminate (D) because the difference between *desalination capacity* and *operational desalination capacity*—represented by the dotted and solid lines, respectively—was considerably less than 20 million cubic meters per day in 2010. This answer choice is a trap based on mixing up the *desalination capacity* with the *number of desalination plants* (represented by the bars). The correct answer is (A).

Section 2: Writing and Language

1. **D** Note the question! The question asks whether the sentence should be added, so it is testing consistency. If the content of the new sentence is consistent with the topics presented in the passage, then it should be added. The previous sentences discuss preventable auto accidents and lists their causes; the following sentence introduces *A recent set of research findings* pertaining to a single potential preventative factor, mountain lions. The proposed sentence would add information stating that *Statistics show that people are 23 times more likely to be involved in collisions when they are texting and driving*, which is not relevant to the topic of research findings on mountain lions; eliminate (A) and (B). The sentence does not *contradict the paragraph's main focus*, so eliminate (C). The additional sentence does *deviate from the paragraph's main topic*. The correct answer is (D).
2. **D** Verbs change in the answer choices, so this question tests consistency of verbs. A verb must be consistent with its subject and with the other verbs in the paragraph. The subject of the verb is *a recent set of research findings*, which is singular. To be consistent, the underlined verb must also be singular. Eliminate (C) because *have suggested* is plural. The paragraph is in present tense, so the underlined verb should also be in present tense. Eliminate (A) and (B) because they are not present tense. Choice (D) appropriately uses a singular, present tense verb. The correct answer is (D).

3. **A** Note the question! The question asks which option best combines the two sentences, so it's testing precision and concision. Look for the answer that combines the sentences while maintaining the meaning of the originals. The sentences use the repetitive phrasing *We probably want to start and before we do that*, so the correct answer will eliminate this redundancy without introducing another. Choice (A) eliminates the redundancy without introducing any other errors, so keep it. *Images and funny ones* are redundant, so eliminate (B). Choice (C) does not eliminate the original redundancy, so eliminate it. Choice (D) uses the subject *we* twice, so eliminate it. The correct answer is (A).
4. **A** Note the question! The question asks whether the sentence should be kept or deleted, so it is testing consistency. If the content of the underlined sentence is not consistent with the topics presented in the passage, then it should be deleted. The sentence states that *The eastern part of the United States is at a special risk for these collisions because deer tend to roam freely and plentifully around the region*. The sentence mentions *these collisions*, which refers directly to the *1.2 million collisions each year between automobiles and deer* from the previous sentence. Therefore, the sentence should be kept; eliminate (C) and (D). The sentence is only about accidents involving deer, not why all car travel is so dangerous in the United States; eliminate (B). The information in the sentence *does provide a detail that explains the statistic in the previous sentence*. The correct answer is (A).
5. **A** Pronouns are changing in the answer choices, so the question is testing consistency of pronouns. A pronoun must be consistent in number with the noun it refers to. The pronoun refers to the plural *deer populations*. To be consistent, the underlined pronoun must also be plural. *They* is a plural pronoun, so keep (A). *We* is a first person pronoun that cannot be used to refer to *deer populations*, so eliminate (B). *It* and *one* are singular, so eliminate (C) and (D). The correct answer is (A).
6. **C** Note the question! The question asks where sentence 4 should be placed, so it's testing consistency. The sentence must be consistent with the ideas that come both before and after it. Sentence 4 states that *Deer are thus able to reproduce without restriction*, so this sentence should come after the reason deer can reproduce freely. Sentence 2 states *development and hunting have eliminated this threat*, mentioned in sentence 1, *that deer face no natural predators in the eastern states*. Sentence 4 must come directly after the elimination of the threat, allowing for increased reproduction. The correct answer is (C).
7. **B** The vocabulary is changing in the answer choices, so this question is testing precision of word choice. Look for a word whose definition is consistent with the other ideas in the sentence. According to the context of the sentence, *the mountain lion populations of the west* are mentioned *as evidence*, so the underlined word should mean something like "uses" or "references." *Opines* means "express an opinion," so eliminate (A). *Cites* means "quotes," which matches the prediction, so keep (B). *Says* means "states," which is not the same as "uses," so eliminate (C). *Proclaims* means "announces," so eliminate (D). The correct answer is (B).
8. **A** Transitions change in the answer choices, so this question tests consistency of ideas. A transition must be consistent with the relationship between the ideas it connects. The first part of the sentence says that *Pugh cites the mountain lion populations as evidence*, and the second part says what the evidence shows: *these big cats "can coexist in close proximity with people, with very few conflicts."* The word *that* appropriately indicates that the second part of the sentence is what the evidence shows, so keep (A). The second part of the sentence is not an alternative to the first part, so eliminate (B). Eliminate (C) because it makes the sentence incomplete. There is no indication of time in the sentence, so eliminate (D). The correct answer is (A).
9. **B** Transitions change in the answer choices, so the question is testing the consistency of ideas. A transition must be consistent with the relationship between the ideas it connects. The sentence before the transition states that *it doesn't seem that introducing this fierce predator into the wild*

would be beneficial enough to offset its terrorizing costs. The sentence that starts with the underlined transition states that *Pugh and her team say these predators could save approximately five times as many people from deer-related deaths as they might endanger through unprovoked attacks*. These ideas contrast, so eliminate (A), (C), and (D), which would all indicate that the ideas agree. *Still* appropriately indicates a contrast. The correct answer is (B).

10. **C** Prepositions change in the answer choices, so this question tests idioms. Because the phrase *data are* is plural, the phrase *a good amount*, which is singular, is inconsistent; eliminate (A). The correct idiom is *enough to overcome*, so eliminate (A) and (D). The correct answer is (C).
11. **A** Pronouns are changing in the answer choices, so the question is testing consistency of pronouns. A pronoun must be consistent in number with the noun it refers to or with other pronouns in the sentence. The sentence contains the pronoun *we*, which is first-person plural. To be consistent, the underlined pronoun should also be first-person plural. Eliminate (B) and (C), which contain singular pronouns. Eliminate (D) because *their* is third person. Choice (A) appropriately uses the first-person plural pronoun *our*. The correct answer is (A).
12. **B** The vocabulary is changing in the answer choices, so this question is testing precision of word choice. Look for a phrase whose definition is consistent with the other ideas in the sentence. The sentence states that *New Orleans has always been a kind of national treasure with “bases” or “origins” in French, American, African, and indigenous cultures*. *Routes* means “way” or “manner of travel,” but New Orleans does not include a way through these various cultures; eliminate (A) and (D). *Roots* in context means “origins” that reside *in* the various cultures, not *of* them; eliminate (C). The correct answer is (B).
13. **D** Transitions change in the answer choices, so this question tests consistency of ideas. There is also the option to DELETE; consider this choice carefully, as it is often correct because it is the most concise answer. The previous sentence says that *This*, which refers to the status of New Orleans as a *national treasure*, *has become even more apparent since 2005, when Hurricane Katrina nearly wiped the city off the map*. The sentence that starts with the underlined portion says that *Katrina brought new attention to the city*. This sentence is not an *example* of the idea in the previous sentence, so eliminate (A). The two sentences do not contrast with each other, so eliminate (B). This sentence is not a conclusion based on the previous idea, so eliminate (C). There is no need for a transition. The correct answer is (D).
14. **C** Verbs are changing in the answer choices, so the question is testing the consistency of verbs. A verb must be consistent with its subject and with the other verbs in the sentence. The subject of the verb is *status*, which is singular. To be consistent, the underlined verb must also be singular. Eliminate (B) because *have shifted* is plural. The other verbs in the sentence, *has...been praised* and *has changed*, are past tense. To be consistent, the underlined verb must also be past tense. Eliminate (A) and (D) because they are not past tense. The underlined verb is the second in a list of two (*has changed* and *shifted*); the helping verb *has* at the beginning of the list can refer to both *changed* and *shifted*. Choice (C) is consistent with the sentence. The correct answer is (C).
15. **D** Note the question! The question asks whether the sentence should be kept or deleted, so it is testing consistency. If the content of the underlined sentence is not consistent with the topics presented in the passage, then it should be deleted. The sentence states that *Louis Armstrong was born in New Orleans in 1901 and began playing trumpet at an early age*. This is the only reference to Louis Armstrong in the entire passage and is not consistent with the paragraph, so eliminate (A) and (B). The sentence does not *suggest that the type of music discussed in the passage is insignificant*, so eliminate (C). Choice (D) accurately states that the sentence *is only vaguely related to the paragraph’s main idea*. The correct answer is (D).

16. **C** Transitions change in the answer choices, so this question tests consistency of ideas. A transition must be consistent with the relationship between the ideas it connects. The first part of the sentence states that *jazz gets the attention because it is a kind of national music*, and the second part gives a description of jazz. Choice (A) lacks any kind of transition that would indicate the relationship between these ideas, and it also makes the sentence incomplete; eliminate (A). Choices (B), (C), and (D) all include transition words that indicate that the second part of the sentence describes the first part. Since *that* in (B) refers to *music*, there is no need to also use the pronoun *it*; eliminate (B). For (D) to work, the verb *has* would need to be included after *which*. Since it is not included, eliminate (D). The correct answer is (C).
17. **B** Note the question! The question asks which option best combines the two sentences, so it's testing precision and concision. Look for the answer that combines the sentences while maintaining the meaning of the originals. The phrases *you may be one of them* and *you aren't alone* use repetitive phrasing, so the correct answer will eliminate this redundancy without introducing another. Choices (C) and (D) don't get rid of the redundancy, so eliminate them. Choices (A) and (B) both express the same idea, but (B) is more concise. Eliminate (A). The correct answer is (B).
18. **C** The phrase after *remained* is changing in the answer choices, so the question is testing precision and concision. First, determine whether the phrase is necessary. The sentence already states that the genre *has remained...durable and adaptable*, so there is no need to repeat that idea. Eliminate any choices that are redundant. Choices (A), (B), and (D) each repeat the idea of *remained by* *stayed*, so eliminate them. The correct answer is (C).
19. **A** Commas are changing in the answer choices, so the question is testing comma usage. The phrase *the polkas and waltzes* is necessary information that shouldn't be bracketed by commas, so eliminate (B). There is no need to break up the phrase *the polkas and waltzes of the late nineteenth century* with any punctuation, so eliminate (C) and (D). The correct answer is (A).
20. **B** Note the question! The question asks *which choice adds the most relevant supporting information*. It is testing consistency. Eliminate any answer choices that are not consistent with the information stated in the question. The start of the paragraph says that *the work of the "King of Zydeco" Clifton Chenier changed (musical) forms*, so the correct choice will explain how Chenier changed zydeco music. The choices that acknowledge that Chenier was *born in...Opelousas*, that *he won a Grammy*, and that he *was greatly respected at the time of his death* do not explain how he changed zydeco music; eliminate (A), (C), and (D). That he *infused the uptempo music of blues and jazz* explains how Chenier changed zydeco music. The correct answer is (B).
21. **A** Commas are changing in the answer choices, so this question is testing comma usage. The phrase *like BeauSoleil continue to help zydeco to evolve* is a complete idea that does not need to be broken up by any commas, so keep (A). Choices (B) and (C) add a comma after *zydeco*, so eliminate them. Choice (D) adds a comma after *BeauSoleil*, so eliminate (D). The correct answer is (A).
22. **D** The vocabulary is changing in the answer choices, so this question is testing precision of word choice. Look for a word whose definition is consistent with the other ideas in the paragraph. The sentence before the underlined portion states that *Zydeco is a pleasure to listen to, but it is just as important culturally*. The next sentence continues to state that *zydeco provides an important reminder*. The correct choice will be something like "important cultural thing." *Memorial* means "a monument or tribute" and can be important culturally, but a memorial is mostly about the thing it commemorates; eliminate (A). *Agreement* means "accordance in opinion," so eliminate (B). *Victory* means "triumph," so eliminate (C). A *cultural artifact* is in fact something important to a culture. The correct answer is (D).

23. **D** Commas are changing in the answer choices, so the question is testing comma usage. In (C), the phrase *in San Francisco conducted* is surrounded by commas. This phrase is necessary to the main meaning of the sentence, so eliminate (C). A pair of dashes can also surround unnecessary information, but the phrase *in San Francisco conducted over the past fifty years* is necessary to the main meaning of the sentence, so eliminate (B). There is no need to break up the phrase *Excavations in San Francisco conducted over the past fifty years* with a comma, so eliminate (A). The correct answer is (D).
24. **C** Note the question! The question asks whether a sentence should be added, so it is testing consistency. If the content of the new sentence is consistent with the topics presented in the passage, then it should be added. The surrounding sentences discuss *unlikely building foundations: ships*, and that *San Francisco's subway...passes right through one*. The proposed sentence would add information stating that *San Francisco was for many years known as Yerba Buena*, which is not relevant to the main topic of the paragraph, so eliminate (A) and (B). The passage isn't *primarily concerned with mass transit*, so eliminate (D). Choice (C) accurately states that the new sentence *obscures the focus of the passage by introducing a detail that does not have an obvious connection*. The correct answer is (C).
25. **D** Note the question! The question asks which option best combines the two sentences, so it's testing precision and concision. Choice (A) refers to San Francisco as *an answer*, but San Francisco is the location of the question posed at the end of the previous paragraph, not an answer. Eliminate (A). The word *so* between the parts of the sentence in (B) inaccurately make it seem like San Francisco manufactured land because of *the answer*. Eliminate (B). Choice (C) includes the phrase *Even though*, but a contrast is not needed. Eliminate (C). Choice (D) states *The answer* to the question at the end of the previous paragraph in a way that connects the ideas precisely. The correct answer is (D).
26. **A** Pronouns are changing in the answer choices, so the question is testing consistency of pronouns. A pronoun must be consistent in number and gender with the noun it refers to. The pronoun refers to *each of these disciplines*, which is singular—the word *each* is singular, and the prepositional phrase *of these disciplines* modifies *each* but is not what the pronoun refers to. To be consistent, the underlined pronoun must also be singular. *Our* and *their* are plural pronouns, so eliminate (B) and (C). *His* refers to a male and *each of these disciplines* lacks gender specificity, so eliminate (D). Choice (A) appropriately uses the gender-neutral, singular pronoun *its*. The correct answer is (A).
27. **B** Note the question! The question asks where sentence 5 should be placed, so it's testing consistency. The sentence must be consistent with the ideas that come both before and after it. Sentence 5 starts with the transition *for example*, and the example is *archaeology focused on human history, while geology concerned itself with natural history*. There is nothing in sentence 4 that sentence 5 could be an *example* of, so eliminate (A). Sentence 5 could be an example of *traditional scholarly boundaries* mentioned in sentence 1, and it also introduces two disciplines, which provides a point of reference for the phrase *each of these disciplines* in sentence 2. Sentence 5 belongs between sentences 1 and 2. The correct answer is (B).
28. **C** Transitions are changing in the answer choices, so the question tests consistency of ideas. A transition must be consistent with the relationship between the ideas it connects. The sentence that starts with the transition says that *we may think of the ground as something that is relatively constant*, but after a comma the sentence changes direction to say that *the archaeosphere suggests that the opposite is true*. Therefore, there needs to be an introduction indicating this change of direction. *Because* and *since* both indicate that ideas agree, so eliminate (A) and (D). *But* would indicate that this sentence contrasts with the one before it, rather than that the two ideas in

- this sentence contrast with each other, so eliminate (B). *While* appropriately indicates a contrast within the sentence. The correct answer is (C).
29. **D** Pronouns change in the answer choices, so this question tests consistency of pronouns. A pronoun must be consistent with the noun it refers to or with other pronouns. The pronouns *them* and *they* in (A) and (B) do not clearly refer to anything, so they are imprecise. Eliminate (A) and (B). The previous sentence uses the first-person plural pronoun *we*, and both *us* and *we* are consistent with that. Choices (C) and (D) both express the same idea, but (D) is more concise. Eliminate (C). The correct answer is (D).
30. **C** Transitions are changing in the answer choices, so the question is testing the consistency of ideas. A transition must be consistent with the relationship between the ideas it connects. The sentence that starts with the underlined transition says *some companies in Scandinavia have begun to mine the archaeosphere*, which is provided to support information in the prior sentence stating that *the classification and study of the archaeosphere could be beneficial and not just for the work of archaeologists and geologists*. This sentence is not an interpretation of the previous sentence, as *in a sense* would indicate, so eliminate (A). This sentence does give an *example* of the idea stated in the previous one, so keep (C). This sentence is not a conclusion based on the previous one, so eliminate (D). The correct answer is (C).
31. **A** The length of the phrase after *resources* changes in the answer choices, so this question could test concision. Choice (D) is the shortest option, but *being* is present tense, which is not consistent with the phrase *in earlier ages*, which indicates the past. Eliminate (D). The phrase *to have been wasted* is also inconsistent with *in earlier ages*, so eliminate (B). The first part of the sentence, *some companies in Scandinavia have begun to mine the archaeosphere for resources*, is an independent clause. In (C), the second part of the sentence, *they have been wasted or discarded in earlier ages*, is also an independent clause. A comma alone cannot be used between two independent clauses, so eliminate (C). Choice (A) appropriately connects the two parts of the sentence and gives the sentence a precise meaning. The correct answer is (A).
32. **D** Pronouns are changing in the answer choices, so the question is testing consistency of pronouns. A pronoun must be consistent with the noun it refers to or with other pronouns in the sentence. The sentence contains the singular pronoun *it*. To be consistent, the underlined pronoun should also be singular. Eliminate (B) because *they* is plural. *Its'* is not a word that occurs in English, so eliminate (A). *It's* is a contraction of *it is*, which is not necessary in this context; eliminate (C). Choice (D) appropriately uses the singular possessive pronoun *its*. The correct answer is (D).
33. **B** Note the question! The question asks for the choice which *offers an accurate interpretation of the data in the figure*, so it tests consistency. Read the labels on the graph carefully, and look for an answer that is consistent with the information given in the graph. There is no information in the figure regarding the proportion of *human and industrial waste products* in the *cover soil* or in the soil at any depth, so eliminate (A) and (C). The figure indicates that ferrous waste, incombustible waste, and former roadbed are all present below 10 meters. These are all examples of *traces of human development*, so (B) is consistent with the figure. Eliminate (D) because there is *human influence* below 10 meters. The correct answer is (B).
34. **B** The vocabulary is changing in the answer choices, so this question is testing precision of word choice. Look for a phrase whose definition is consistent with the other ideas in the sentence. The opening of the passage states that scientific endeavors purporting to better the human condition *have saved countless lives* and that this science in turn has done something similar for *the lives of many, even the seriously ill*. From the context of the passage, the phrase should be something like “better their personal condition.” *Healthy* matches this prediction, but *medical* means “pertain-

ing to medicine” instead of the patient’s own condition; eliminate (A). *Tolerable and manageable* matches, so keep (B). Neither *complicated and expensive* nor *patient and tolerant* match “better their personal condition,” so eliminate (C) and (D). The correct answer is (B).

35. **D** Vocabulary changes in the answer choices, so this question tests precision of word choice. *Affect* as a noun means “feeling” or “emotion,” which is not consistent with the sentence’s focus on *genetic sequencing*, so eliminate (A) and (B). The word *effecting* can only be used in certain contexts to mean “bring about a desired result,” which is also not consistent with the sentence’s focus; eliminate (C). The phrase *in effect* is a transition that means “essentially,” which appropriately introduces the statement in the rest of the sentence about *genetic sequencing*. The correct answer is (D).
36. **B** Note the question! The question asks which *most effectively sets up the examples in the following sentences*, so it is testing consistency. Eliminate answers that are not consistent with the purpose stated in the question. The example after the underlined sentence is *a large category of patients—expectant mothers*, so the correct choice will be related to the category of *expectant mothers*. *Children* and *inheritable diseases* are not related to the category of *expectant mothers*, so eliminate (A) and (C). *Patients...of any age* could include *expectant mothers*, so keep (B). *Parents’ behaviors* are not mentioned in the passage, so eliminate (D). The correct answer is (B).
37. **D** The length of the phrase changes in the answer choices, so this question tests concision. There is also the option to DELETE; consider this choice carefully, as it is often correct. *Medical risks* is redundant because each of the items in the subsequent list—*transmittable diseases, inborn illnesses, and birth defects*—is a medical risk; eliminate (A). *The dark side of medicine* is unrelated and *unpleasant things* is also redundant, so eliminate (B) and (C). Choice (D) is concise and gives the sentence a precise meaning. The correct answer is (D).
38. **A** The subject of the underlined portion changes in the answer choices, so this question tests consistency. The subject of the underlined section should match *she* in the non-underlined beginning of the sentence. The beginning of the sentence indicates that she could *continue with...pregnancy*, so look for an answer that is consistent with the idea of *pregnancy*. Neither *a child* nor *advice of a genetic counselor* is consistent with someone who could be pregnant, so eliminate (C) and (D). While a *genetic counselor* could be pregnant, (A) is more precise than (B) is because (A) specifies that the *mother* is the one who might seek *the guidance of a genetic counselor*. Eliminate (B). The correct answer is (A).
39. **C** Punctuation changes in the answer choices, so this question tests how to connect ideas with the appropriate punctuation. The first part of the sentence, *Older parents might even consider genetic testing before trying to conceive, thus reducing the risks associated with* is not an independent clause. A colon can only be used after an independent clause, so eliminate (A). There is no reason to break up the phrase *the risks associated with conceptions* with any punctuation, so eliminate (B) and (D). The correct answer is (C).
40. **D** Punctuation changes in the answer choices, so this question tests how to connect ideas with the appropriate punctuation. The first part of the sentence, *As in the case of expectant mothers, genetic counseling has many facets*, is an independent clause. The second part of the sentence, *the two primary divisions are diagnosis and support*, is also an independent clause. A comma on its own cannot be used between two independent clauses, so eliminate (A). Apostrophes also change in the answer choices, so this question also tests apostrophe usage. When used with a noun, an apostrophe indicates possession. Nothing belongs to *facets*, so no apostrophe is necessary. Eliminate (B) and (C). The correct answer is (D).

41. **C** Note the question! The question asks *which most effectively suggests that the “two primary divisions” are not often separate* with different vocabulary in the answer choices, so it is testing precision of word choice. *Complicated* means “difficult to understand,” which is not consistent with *not separate*, so eliminate (A). *Specialized* means “specifically tailored,” which is also not consistent with *not separate*, so eliminate (B). *Intertwined* means “tied together,” which is consistent with *not separate*, so keep (C). *Enriching* means “adding value to,” which is not consistent with the question, so eliminate (D). The correct answer is (C).
42. **D** Transitions are changing in the answer choices, so the question is testing the consistency of ideas. A transition must be consistent with the relationship between the ideas it connects. The part of the sentence before the transition talks about *genetic counseling’s benefits*, and the part of the sentence after the transition states that *the field and its accomplishments are still not widely known*. Therefore, a change-of-direction transition is necessary. *Therefore* and *thus* both indicate that ideas agree, so eliminate (A) and (C). The fact that *the field and its accomplishments are not widely known* is not an example of a phenomenon, so eliminate (B). *However* appropriately indicates a contrast. The correct answer is (D).
43. **D** Note the question! The question asks whether the sentence should be added, so it is testing consistency. If the content of the new sentence is consistent with the topics presented in the passage, then it should be added. The surrounding sentences discuss *the work of genetic counselors* in general and how this work is *still not widely known*. The proposed sentence would add information stating that *the number of children born with Down syndrome has decreased significantly since this type of genetic prediction became available in the mid-1970s*. The sentence is not relevant to the main topic of the paragraph, so eliminate (A) and (B). The example is not *inconsistent with the work of genetic counselors*, so eliminate (C). Choice (D) accurately states that the new sentence *does not have a significant bearing on this paragraph*. The correct answer is (D).
44. **C** Note the question! The question asks where sentence 2 should be placed, so it tests consistency. There is also the option to DELETE; consider this choice carefully, as it is often correct. The sentence must be consistent with the ideas that came both before and after it. Determine the subject matter of the sentence, and determine if there are other sentences also discussing that information. Sentence 2 says that *How effectively they communicate their findings can...be a matter of life and death*. Based on the context of the passage, the *they* in this sentence refers to *genetic counselors*, so look for another sentence about *genetic counselors*. Sentence 5 is the only sentence in the paragraph to mention *genetic counselors*, so eliminate (A) and (B). Sentence 2 provides new information directly related to the content of sentence 5, so eliminate (D). The correct answer is (C).

Section 3: Math (No Calculator)

- A** The question asks for the solutions to a quadratic. Rather than do complicated algebraic manipulation, try out the numbers in the answer choices. Pick a value that appears in more than one answer, such as $x = -3$. Plug -3 into the equation for x to get $-3(-3)^2 - 3(-3) + 18 = 0$ or $-3(9) + 9 + 18 = 0$. This becomes $-27 + 27 = 0$, which is true. Eliminate (C) and (D), which do not contain the value $x = -3$. Now try $x = 2$ to get $-3(2)^2 - 3(2) + 18 = 0$ or $-3(4) - 6 + 18 = 0$. This becomes $-12 + 12 = 0$, which is true, so eliminate (B). The correct answer is (A).
- C** The question asks for the equation of the line shown in the graph. To determine this, plug an x -value from the graph into the equation and see if it gives the correct y -value. The point $(1, 0)$ is on the graph of m , so plug in $x = 1$ and $y = 0$. Choice (A) becomes $1 = -2$, which is not true, so

eliminate (A). Choice (B) becomes $0 = -2$, so eliminate (B). Choice (C) becomes $0 = 2(1) - 2 = 2 - 2 = 0$. This is true, so keep (C), but check (D) just in case. Choice (D) becomes $0 = 2(1) + 2 = 2 + 2 = 4$, so eliminate (D). The correct answer is (C).

3. **D** The question asks for the area of a sector of a circle. The parts of a circle all have the same proportional relationship, so use the given information to determine the part:whole relationship for circle C . A full circle is 360° , and angle MCN measures 60° . Set up the proportion $\frac{60^\circ}{360^\circ} = \frac{\text{sector}}{48}$. Reduce the fraction on the left to get $\frac{1}{6} = \frac{\text{sector}}{48}$, then cross-multiply to get $6(\text{sector}) = 48$. Divide both sides by 6 to get $\text{sector} = 8$. The correct answer is (D).
4. **C** The question asks for the answer that is equivalent to the sum of two expressions. The word *sum* indicates addition, so add the two expressions to get $x^2 + x - x - 2 = x^2 - 2$. The correct answer is (C).
5. **D** The question asks for the function whose graph CANNOT have two x -intercepts, so eliminate those that can. Zeros, which are mentioned in the answers, are also known as x -intercepts, so find the answer choice that cannot have two zeros. An absolute-value function with real zeros will have two x -intercepts. Eliminate (A). Cubic functions can have up to three real zeros, so eliminate (B). A quadratic function with real zeros can have up to two real zeros, so eliminate (C). Only a function with no real zeros or just one real zero CANNOT have two x -intercepts. The correct answer is (D).
6. **A** The question asks for the value of c for a certain value of t , so put $t = 4$ into the given equation to get $\sqrt{c - 1} - 4 = 0$. Now, rather than doing complicated algebra, try out the answers to see which one makes this equation true. Start with (B) and plug in 15 for c . The equation becomes $\sqrt{15 - 1} - 4 = 0$, or $\sqrt{14} - 4 = 0$. This is not true, so eliminate (B). The square root of 14 would be less than the square root of 16, or less than 4, so the left side of the equation would give a negative value with (B). A larger value is needed for c , so eliminate (C) and (D). The correct answer is (A).
7. **B** The question asks for the value of xy , the product of the coordinates of a possible solution to the system of equations. To solve this system, substitute y^2 into the second equation for x to get $6y^2 + 9 = -3(2y - 3)$. Distribute the -3 across the terms on the right side to get $6y^2 + 9 = -6y + 9$. Subtract 9 from both sides to get $6y^2 = -6y$. Divide both sides by $6y$ to get $y = -1$. Now, plug the value for y back into the first equation to get $x = (-1)^2 = 1$. To find the value of xy , multiply the two values: $(-1)(1) = -1$. The correct answer is (B).
8. **B** The question asks for a system of inequalities to represent the situation. Rather than try to translate a whole inequality at once, deal with one piece of information at a time. Start with a straightforward piece of information, such as the total number of miles. This value will be made up of the miles Richard walks, w , and the miles he bikes, b , so it translates to $w + b$. The total miles must be *no more than 15*, which translates to $w + b \leq 15$. Eliminate (C) and (D) because they do not include this inequality. Now compare the remaining answers. Both have the same numbers and variables, and the only difference is the direction of the inequality sign. These inequalities relate to the other part of the question, the calories burned, which should be *at least 500*. *At least* is represented by the \geq symbol, so eliminate (A). The correct answer is (B).

9. **D** The question asks for the meaning of the number 491.67 in context. Label what is known about the equation. The left side is Rankine degrees and the C on the right side is Celsius degrees. The number 491.67 is on the right side, so it has something to do with Rankine degrees. However, all the answers refer to Rankine degrees, so it is difficult to eliminate anything at this time. Try out some different values in the equation to see how the variables relate. Since this is the No Calculator section, start with the easiest plug in, which will be in (D). If $C = 0$, then $R(0) = 1.8(0) + 491.67 = 491.67$. Therefore, at 0 degrees Celsius, the temperature in degrees Rankine is 491.67. This matches the information in (D). The correct answer is (D).
10. **A** The question asks for an expression that is equivalent to the given exponential one. The key to solving exponent questions is often to rewrite the base in a different form. The number 4 can be rewritten as 2^2 , so the expression becomes $(2^2)^{\frac{5}{6}}$. To raise an exponential expression to a power, multiply the exponents, so this becomes $2^{\frac{10}{6}} = 2^{\frac{5}{3}}$. With fractional exponents, the numerator is the power and the denominator is the root, so this can be rewritten as $\sqrt[3]{2^5}$. There are five 2s under the root sign, and for every three, one of them can come out. The expression becomes $2\sqrt[3]{2^2} = 2\sqrt[3]{4}$. The correct answer is (A).
11. **C** The question asks for the value of $c + 2b$. Start by multiplying the second equation by 2 to get the value of $2b$, which is $2b = -2xy$. Add that to the expression for c , $x^2 + y^2$, to get $x^2 + y^2 - 2xy$. None of the answer choices are in this form, so factor the expression to make it look like the answers. It becomes $x^2 - 2xy + y^2 = (x - y)^2$. The correct answer is (C).
12. **B** The question asks for the volume of a cone. The formula for this is given at the beginning of the Math sections as $V = \frac{1}{3}\pi r^2 h$. There aren't explicit values for the radius and height given in the question, so ratios will be necessary to find the new value. The new radius is one-third the original, so the value will be written as $\frac{r}{3}$. The new height is triple the original, so it will be written as $3h$. Plug these new values in the formula for the volume of a cone to get $V = \frac{1}{3}\pi r^2 h = \frac{1}{3}\pi \left(\frac{r}{3}\right)^2 (3h) = \frac{1}{3}\pi \left(\frac{1}{9}\right)r^2(3)h = \frac{1}{3}\pi r^2 h \left(\frac{1}{9}\right)(3) = \frac{1}{3}\pi r^2 h \left(\frac{1}{3}\right)$. The value of $\frac{1}{3}\pi r^2 h$ is the volume of the original cone, 12 cubic millimeters. Plug this value into the formula for the new cone to get $(12)\left(\frac{1}{3}\right) = 4$. The correct answer is (B).
13. **A** The question asks for the equation that will represent how much money Marcy will save each month by drinking 9 fewer cups of coffee. The question says that one coffee pod costs \$7 and brews 4 cups of coffee. Set up a proportion of $\frac{\text{cups}}{\text{dollars}}$ to figure out how much 9 cups of coffee will cost her: $\frac{4}{7} = \frac{9}{d}$. To make this look like the answer choices, multiply both sides by d to get $\frac{4}{7}d = 9$. The correct answer is (A).
14. **A** The question asks how many additional servings of smoothies can be made for each additional banana. Try some numbers in the equation to see how the variables are related in order to solve

this question. Start with $b = 6$ bananas and solve for the number of servings of smoothie. The equation becomes $s = 6 - 4 = 2$. Now plug in $b = 7$ for the additional banana to get $s = 7 - 4 = 3$. The difference in number of servings of smoothie from 2 bananas to 3 bananas is $3 - 2 = 1$ serving. The correct answer is (A).

15. **D** The question asks for the graph of $y = -g(x)$ given the equation of $g(x)$. Start by getting some idea of what the original graph of $g(x)$ will look like. Take advantage of the fact that the equation has been given and plug in $x = 0$ to find the y -intercept of the function. The equation becomes $2 - 3^0 = 2 - 1 = 1$. The y -intercept of $g(x)$ is 1, so multiply this value by -1 to find the y -intercept of $-g(x)$: $(-1)(1) = -1$. The only graph that has a y -intercept at -1 is (D). Therefore, the correct answer is (D).

16. $\frac{31}{2}$ or 15.5

The question asks for the value of m in a system of equations. To get just one equation in terms of m , plug the value of n given in the second equation into the first equation to get $\frac{1}{3}(5m - 3m) = \frac{31}{3}$. Multiply both sides of the equation by 3 to eliminate the fractions, and combine like terms to get $2m = 31$. Divide both sides by 2 to get $m = \frac{31}{2}$. The correct answer is $\frac{31}{2}$.

17. **10** The question asks for the maximum number of months Asaf can have his gym membership. Use the information given in the question to set up an inequality to solve. Asaf must pay a rate of \$50 per month for the membership, so this must be multiplied by a number of months, and the first piece of the inequality is $50m$. Next, Asaf must pay a one-time fee of \$30, so this must be added to the first piece to get $50m + 30$. Finally, the total must not exceed \$555, so the complete inequality is $50m + 30 \leq 555$. Subtract 30 from both sides to get $50m \leq 525$, and divide both sides by 50 to get $m \leq 10.5$. The question asks for an answer as a whole number of months, so round down to 10. The correct answer is 10.

18. **117** The question asks for the value of c , an angle measure on the diagram. There are 180° in a line, so use this to find the angle to the left of the one that measures 97° : $180^\circ - 97^\circ = 83^\circ$. The sum of the internal angles of a triangle must equal 180° , so add 83° and 34° and subtract this from 180° to find the measure of the third angle, which is $180^\circ - (83^\circ + 34^\circ) = 63^\circ$. The angle marked c° is next to the one that is 63° , so they add up to 180, and $180^\circ - 63^\circ = 117^\circ$. The correct answer is 117.

19. $\frac{12}{5}$ or 2.4

The question asks for the solution to the equation. To begin to simplify the equation, distribute the numbers across the terms on the left-hand side of the equation to get $9s - 18 + 3s + 6 = 7s$. Next, combine like terms on the left to get $12s - 12 = 7s$. Subtract $7s$ from both sides to get $5s - 12 = 0$, then add 12 to both sides to get $5s = 12$. Divide both sides by 5 to get $s = \frac{12}{5}$. This fits in the grid-in box, so enter it in. The correct answer can also be entered as 2.4.

20. **7** The question asks for the value of x , a variable in two equivalent expressions. The word *equivalent* means that these two expressions need to be equal, so write an equation to show this:

$\frac{4c+1}{(2c-3)^2} - \frac{2}{(2c-3)} = \frac{x}{(2c-3)^2}$. Multiply $\frac{2}{(2c-3)}$ by $\frac{(2c-3)}{(2c-3)}$, so that the two expressions on the left have a common denominator and can be combined. The left side of the equation becomes $\frac{4c+1}{(2c-3)^2} - \frac{4c-6}{(2c-3)^2}$ or $\frac{4c+1-4c+6}{(2c-3)^2}$. Combine like terms in the numerator to get $\frac{7}{(2c-3)^2}$. The left side of the equation must equal the right, so $\frac{7}{(2c-3)^2} = \frac{x}{(2c-3)^2}$. Because both sides have the same denominator, set the numerators equal to one another, so $x = 7$. The correct answer is 7.

Section 4: Math (Calculator)

- D** The question asks for the number of cups of cream needed to make 24 servings of hot chocolate. Start by determining how many fluid ounces are needed for 24 servings of hot chocolate by multiplying: $4.5 \times 24 = 108$ fluid ounces. Next, convert to cups by making a proportion:

$$\frac{1 \text{ cup}}{8 \text{ fluid ounces}} = \frac{x \text{ cups}}{108 \text{ fluid ounces}}$$

Cross-multiply to get $8x = 108$. Divide both sides by 8 to get $x = 13.5$ cups of cream. The correct answer is (D).
- C** The question asks for the two consecutive years with the greatest change in percent. The percents are shown on the vertical axis, so a large change in percent will result in a steep slope on the graph. There are many small changes on the graph, but there is a steep one from 2006 to 2007. The correct answer is (C).
- B** The question asks for the equation that defines function g based on the table of values. Try out values of x from the table and eliminate choices that do not match the given value of $g(x)$. Start with the first row. When $x = 2$, $g(2) = 11$. Choice (A) becomes $2(2) + 7 = 4 + 7$, which is 11. Keep (A). Choice (B) becomes $3(2) + 5 = 6 + 5$, which is 11. Keep (B). Choice (C) becomes $4(2) + 3 = 8 + 3$, which is 11. Keep (C). Choice (D) becomes $5(2) + 1 = 10 + 1$, which is 11. Keep (D). Since all the answers worked, try another pair of numbers from the table. When $x = 4$, $g(x) = 17$. Choice (A) becomes $2(4) + 7 = 8 + 7$, which is 15. This doesn't match the target value of 17, so eliminate (A). Choice (B) becomes $3(4) + 5 = 12 + 5$, which is 17. This matches the target value, so keep (B). Choice (C) becomes $4(4) + 3 = 16 + 3$, which is 19. Eliminate (C). Choice (D) becomes $5(4) + 1 = 20 + 1$, which is 21. Eliminate (D). The correct answer is (B).
- D** The question asks for the number of magnets Annalee purchased. Rather than do complicated algebra, try out the values in the answer choices to see if they fit the situation. Start with (B), which indicates that Annalee purchased 4 magnets. Those 4 magnets would cost $\$3(4) = \12 . She bought 10 items, so if she bought 4 magnets, she bought 6 postcards. Those cost \$1 each, so that adds \$6 to her total cost to get $\$12 + \$6 = \$18$. The question states that she paid \$22, so this value is not enough. Annalee must have purchased more magnets to increase the total cost. Eliminate (A) and (B). Try (C) and assume she bought 5 magnets. The magnets would cost $\$3(5) = \15 . She would also buy 5 postcards, adding \$5 to her total to get \$20. This is still not enough, so eliminate (C). The correct answer is (D).

5. **A** The question asks for $x - y$, so look to isolate that expression. Clear the 7 by dividing both sides of the equation by 7 to get $\frac{7(x - y)}{7} = \frac{4}{7}$, so $x - y = \frac{4}{7}$. The correct answer is (A).
6. **A** The question asks for the difference in annual precipitation between Orlando and Saint Cloud. To find the average annual precipitation in Orlando, multiply the precipitation in Columbus by $\frac{13}{10}$ to get $\frac{13}{10}(1,000) = 1,300$ millimeters. To get the average annual precipitation in Saint Cloud, multiply the precipitation in Columbus by $\frac{7}{10}$ to get $\frac{7}{10}(1,000) = 700$ millimeters. The difference in precipitation in the two cities is $1,300 - 700 = 600$ millimeters. The correct answer is (A).
7. **D** The question asks for an equivalent form of an expression. Rather than doing complicated algebraic manipulation, work on one term at a time and look for opportunities to eliminate answers. Start with the first term of the squared expression: $(2.6a)^2 = 6.76a^2$. Next, subtract the a^2 term from the second expression to get $6.76a^2 - 7.3a^2 = -0.54a^2$. Eliminate (A) and (B) because they do not contain this term. Next, find another term in the expression. Both (C) and (D) have the term $-18.2a$, so find the terms without a : $(-3.5)^2 = 12.25$, and $12.25 - (-4.1) = 12.25 + 4.1 = 16.35$. This only appears in (D), so eliminate (C). The correct answer is (D).
8. **C** The question asks for an equation to model a situation. Translate one piece of information at a time and look for opportunities to eliminate answers. The AAUW plans to increase the number of student organizations by t per year for x years, so multiply t by x to get tx . Since (A) and (B) do not include tx , eliminate those answers. The number of student organizations is increasing, so the value tx must be added to the total number of student organizations. The equation needs to include addition, so eliminate (D). The correct answer is (C).
9. **D** The question asks for the equation that represents voltage in terms of resistance and current. According to the question, the resistance, R , of a conductor is found by dividing the voltage, V , by the current, I . Therefore, $R = \frac{V}{I}$. To solve this equation in terms of V , it is necessary to get V by itself. Multiply both sides by I to get $IR = V$. Flip the equation to get $V = IR$. The correct answer is (D).
10. **A** The question asks for the difference in pitching distance in meters but gives measurements in feet. The pitching distance increased from 50 feet to 60.5 feet, for an increase of $60.5 - 50 = 10.5$ feet. To convert this to meters, set up a proportion: $\frac{1 \text{ meter}}{3 \text{ feet}} = \frac{x \text{ meters}}{10.5 \text{ feet}}$. Cross-multiply to get $3x = 10.5$. Divide both sides by 3 to get $x = 3.5$ meters. The correct answer is (A).
11. **B** The question asks for the probability that a social worker in a survey has a pediatric focus and a doctoral degree. Probability is defined as $\frac{\text{want}}{\text{total}}$. Since the social worker is selected at random, the total number of possible outcomes is the total number of social workers: 529. The question asks for the probability that the social worker is a pediatric social worker whose highest level of education is a doctoral degree, so find this number on the chart, which is 221. Put this into the probability definition to get $\frac{221}{529} \approx 0.418$. The correct answer is (B).

12. **C** The question asks for the equation of a line that is perpendicular to the given line. Perpendicular lines have slopes that are negative reciprocals. The given equation and the answer choices are all in standard form: $Ax + By = C$. In standard form, the slope of the line is $-\frac{A}{B}$. Therefore, the slope of the given line is $-\frac{(-3)}{4}$ or $\frac{3}{4}$. The perpendicular slope will be $-\frac{4}{3}$. Determine the slope of each answer choice to see which one matches this value. For (A), the slope is $-\frac{3}{6} = -\frac{1}{2}$. This is not equal to the target slope, so eliminate (A). For (B), the slope is $-\frac{3}{8}$. Eliminate (B). For (C), the slope is $-\frac{4}{3}$, which matches the target slope. The correct answer is (C).

13. **A** The question asks for the value of y in a system of equations, so look for the most direct way to find that. The goal is to make the x -terms disappear. In the two equations, the coefficients of the x -terms have the same value with opposite signs. Therefore, if the two equations were added together, the x -terms would cancel each other out. Stack and add the equations:

$$\begin{array}{r} 2 = -\frac{1}{3}x + y \\ + 6 = \frac{1}{3}x \\ \hline 8 = y \end{array}$$

Therefore, the correct answer is (A).

14. **D** The question asks for a statement that *must be true* based on the results of a poll. With statistics, the only things that can definitively be stated are about the survey or poll itself. Statement (I) says that another poll would have the exact same results, but there is no way to know this, so eliminate (A) and (B). Next, statement (II) says that another survey conducted with people in a different town would have the same results, but again, there is no way to know this. Eliminate (C). Thus, the correct answer is (D).
15. **A** The question asks for the point that satisfies a system of inequalities. Rather than doing complicated algebraic manipulation or trying to sketch the graphs, use the points in the answers to see if they fit the inequalities. Start with (B) and plug in $x = 2$ and $y = -5$ in the first inequality to get $4(2) - 1 \leq -5$ or $8 - 1 \leq -5$. This is not true, so eliminate (B). The number on the left side of the inequality was too big, so the value of x needs to be smaller. Choice (A) has a negative value for x , so try it next. The first inequality becomes $4(-3) - 1 \leq -1$ or $-12 - 1 \leq -1$. This is true, so check the second inequality, which becomes $2 > -3 + (-1)$ or $2 > -4$. This is also true. Thus, the correct answer is (A).
16. **B** The question asks for the difference in time it takes for the two people to burn an additional 20 calories each. The 1 hour that the people have already exercised is irrelevant; only the time it takes to burn an additional 20 calories matters. Use the formula $\text{calories} = (\text{time in minutes}) \times (\text{burn rate})$ to calculate the time for each person. For the person who is speed walking, the formula becomes $20 = (\text{time in minutes}) \times (5.0)$. Divide both sides of the formula by 5 to get $\text{time in minutes} = 4$. For the person who is doing yoga, the formula becomes $20 = (\text{time in minutes}) \times (1.5)$. Divide both sides by 1.5 to get $\text{time in minutes} = 13\frac{1}{3}$. The difference between these times is $13\frac{1}{3} - 4 = 9\frac{1}{3}$. This is closest to 9.3. Therefore, the correct answer is (B).

17. **C** The question asks for the number of calories burned by a 100-pound person shooting baskets for 30 minutes. According to the information above the question, the number of calories burned is equal to the time in minutes multiplied by the burn rate for that exercise. The time is given as 30 minutes, and the burn rate for shooting baskets is 3.0. Therefore, *calories burned* = $(30)(3.0) = 90$ calories. The correct answer is (C).
18. **B** The question asks for the exercise with a burn rate closest to that of the exercise shown on the graph. There are a lot of data points on the graph, but just focus on one. Pick any point that looks like it intersects a known value on each axis, such as 15 minutes and 30 calories. To calculate the burn rate in calories per minute, divide the calories by the time to get $\frac{30 \text{ calories}}{15 \text{ minutes}} = 2.0$. This value is closest to the burn rate of light aerobics. Therefore, the correct answer is (B).
19. **C** The question asks for the variable that could be shown on the vertical axis of the graph. With no label on that axis, the best approach is to read each answer and eliminate those that do not make sense. Choice (A) considers the total distance traveled by the spot of paint, which should always be increasing. The graph of $f(t)$ oscillates, so this does not match. Eliminate (A). Choice (B) describes the distance the spot of paint is from the center of the fan, but the spot is traveling in a circular path with the center of the fan as its center. Therefore, the distance between the spot and the center will not change. Eliminate (B). If (C) is true, it indicates that in this scenario the spot would start at a certain distance above the table, go a maximum distance from the table, decrease to a minimum distance close to the table, and return toward the starting point. This matches the graph on the right, so keep (C), but check out (D) just in case. Choice (D) mentions the speed of the fan blades, but the question states that the fan is at a constant low setting, meaning the speed does not change. Eliminate (D). Therefore, the correct answer is (C).
20. **D** The question asks what must be true about h given an equation. To get a sense of the possible values for h , use the information given about f and g to try out values for those. Make $f = 2$ and $g = -2$. The equation becomes $h = \frac{2 - (-2)}{-2} = \frac{2 + 2}{-2} = \frac{4}{-2} = -2$. Of the given ranges or values for h , only the range in (D) fits this value of $h = -2$. The correct answer is (D).
21. **C** The question asks for the length of a line segment on a figure with two 45° angles and two 90° angles. At the beginning of the Math sections, the relationship between the sides of a $45^\circ:45^\circ:90^\circ$ triangle is listed. Use this information whenever a triangle question contains these values for angles. The hypotenuse is opposite the 90° angle, and its length is the length of one of the legs multiplied by $\sqrt{2}$. The leg given is 4, so MO is $4\sqrt{2}$. Sides MO and LM are legs of a second $45^\circ-45^\circ-90^\circ$ triangle, so they are congruent. Therefore, the length of LM is also $4\sqrt{2}$. The correct answer is (C).
22. **C** The question asks for the approximate population of Maple Mall at the beginning of 2010. Rather than create an algebraic equation with multiple percents, try out the answer choices. Start with (B) and calculate the increase of 30 percent: $81,300 + \frac{30}{100}(81,300) = 81,300 + 24,390 = 105,690$. Next, calculate the increase of 20 percent: $105,690 + \frac{20}{100}(105,690) = 105,690 + 21,138 = 126,828$. Choice (B) is too big, since the chart indicates a current population of 122,000 for Maple Mall. Eliminate (B) and also (A), which is even bigger. Since the population wasn't too far off with (B), try (C) next using the same steps. If the 2011 population was 78,200, the 30% increase would bring it to 101,660.

The 20% increase would bring the population to 121,992. This is very close to 122,000. Therefore, the correct answer is (C).

23. **C** The question asks for the equation that best approximates the relationship between population and area. Select a set of data from the table to test out the equations in the answer choices. Choose the data for Fir Fen because it has the smallest population, making it easier to work with. Use Bite-Sized Pieces to translate the question. The population n is actually in terms of thousands of people, so convert the population of Fir Fen to thousands, which would be 2. Plug 2 into the answer choices to see which one results in the target answer of 22. Choice (A) becomes $A(2) = 2(2) + 18 = 4 + 18 = 22$. This matches the target value of 22, so keep (A), but check the remaining answers just in case. Choice (B) becomes $A(2) = 2.5(2) - 300 = 5 - 300 = -295$. Eliminate (B). Choice (C) becomes $A(2) = 3.5(2) + 15 = 7 + 15 = 22$. Keep (C). Choice (D) becomes $A(2) = 4.5(2) - 107 = 9 - 107 = -98$. Eliminate (D). Since both (A) and (C) worked, try another point, such as Cedar Vale's $n = 12$ and $A(12) = 57$. Choice (A) becomes $A(12) = 2(12) + 18 = 24 + 18 = 42$. This doesn't match the target value of 57, so eliminate (A). The correct answer is (C).
24. **B** The question asks for the best estimate of the number of small business employees with at least \$1,000 in savings. There is a lot of information in the question, so read carefully. It is stated that 62.9 percent of the employees at the small business have less than \$1,000 in savings. To find the percentage of employees who have *at least* that much in savings, subtract 62.9% from the total to get $100\% - 62.9\% = 37.1\%$. Now, calculate the total number of employees working at small businesses in the county by multiplying the number of small businesses by the average number of employees at each small business to get $270 \times 132 = 35,640$ total small business employees. Now take 37.1% of this total: $\frac{37.1}{100}(35,640) \approx 13,222$. This is closest to (B). The correct answer is (B).
25. **A** The question asks for an expression for the surface area of a cube based on the formula for its volume. The reference box at the start of the Math sections gives the formula for the volume of a rectangular solid as $V = lwh$, but on a cube, all the dimensions are the same, so the volume of a cube is $V = s^3$. There are variables in the question and answers, so plug in a value for c to find the volume of the cube. If $c = 4$, the volume is $V = \frac{1}{8}(4^3) = \frac{1}{8}(64) = 8$. Set this equal to the volume formula for a cube to solve for s . If $V = s^3 = 8$, take the cube root of both sides to get $s = 2$. Now find the surface area of the cube, which is the area of one face times the number of faces. For this cube, that value is $SA = (2 \times 2) \times 6 = 24$. This is the target value. Plug $c = 4$ into the answer choices to see which one equals 24. Choice (A) becomes $6\left(\frac{4}{2}\right)^2 = 6(2)^2 = 24$. This matches the target, so keep (A), but check the remaining answers just in case. Choice (B) becomes $6\left(\frac{4^2}{2}\right) = 6\left(\frac{16}{2}\right) = 6(8) = 48$. Eliminate (B). Choice (C) becomes $6(4^2) = 6(16) = 96$. Eliminate (C). Choice (D) will be even larger, so eliminate (D). The correct answer is (A).
26. **B** The question asks for the lowest weight of the people in the elevator. Use the given information about the average weights before and after that person gets off the elevator to find the total weight of all people. For averages, use the formula $T = AN$, in which T is the total, A is the average, and N is the number of things. The initial total weight was $T = (160.5)(6) = 963$ pounds. After the lightest person got off, the total weight was $T = (168)(5) = 840$. The change in total is $963 - 840 = 123$. Because the only difference between the two groups is the weight of the person that gets off the elevator, the weight of that person must have been 123 pounds. Thus, the correct answer is (B).

27. **B** The question asks for the inequality that best represents possible values of s , the number of students in an experiment that chose the interviewee associated with their college. This is a long question with a lot of information, so deal with one piece at a time and look for opportunities to eliminate answers. The first piece of information is that s students chose the interviewee associated with their college, so the correct answer choice needs to include s . All the choices have s , so nothing can be eliminated. The question also states that 58 more people chose the interviewee associated with their college, so that translates to $s + 58$. This eliminates all choices except for (B). The correct answer is (B).
28. **D** The question asks for an equivalent form of the given equation. The word *equivalent* means “the same,” so the expressions in the answer choices need to equal $y = c - x^2$ when expanded. Start with (A) and use FOIL (First, Outer, Inner, Last) to get $y = (c - x)(c - x) = c^2 - cx - cx + x^2$. This does not match the given expression, so eliminate (A). Choice (B) becomes $y = (c - x)(c + x) = c^2 + cx - cx - x^2$. Eliminate (B). Choice (C) becomes $y = \left(\frac{c}{2} - x\right)\left(\frac{c}{2} + x\right) = \frac{c^2}{4} + \frac{cx}{2} - \frac{cx}{2} - x^2$. Eliminate (C). Therefore, the correct answer is (D).
29. **B** This question asks for the value of $s(15)$. There is a graph of $r(x)$, but no equation is given for $s(x)$. The slope of s is described in terms of the slope of r , so start there. The graph shows line r going through points $(1, 0)$ and $(0, -2)$. To calculate the slope of $s(x)$, use $\text{slope} = \frac{y_2 - y_1}{x_2 - x_1}$. Therefore, the slope is $\frac{0 - (-2)}{1 - 0} = \frac{2}{1} = 2$. The slope of $s(x)$ is $\frac{1}{6}$ times the slope of $r(x)$, or $\frac{1}{6}(2) = \frac{2}{6} = \frac{1}{3}$. Now, find the equation for $s(x)$. The slope-intercept form is $y = mx + b$, where m is the slope and b is the y -intercept. The y -intercept is the y -value when $x = 0$. The question states that s passes through the point $(0, 2)$, so the y -intercept is 2. Therefore, $s(x) = \frac{1}{3}x + 2$. To find the value of $s(15)$, plug in 15 for x . The equation becomes $s(15) = \frac{1}{3}(15) + 2 = 5 + 2 = 7$. Thus, the correct answer is (B).
30. **C** The question asks for the coordinates of the center of a circle. The standard equation of a circle is $(x - h)^2 + (y - k)^2 = r^2$, where the center is point (h, k) . In order to find the center, convert this equation to standard form by completing the square. First, group the x - and y -terms together to get $(x^2 + 16x) + (y^2 - 12y) = -19$. Next, divide the coefficient on the x -term, 16, by two and square it to get 64. Add this number to the x -terms and to the other side of the equation to get $(x^2 + 16x + 64) + (y^2 - 12y) = -19 + 64$. Divide the coefficient on the y -term, -12, by two and square it to get 36. Now, add this number to the y -terms and to the other side of the equation to get $(x^2 + 16x + 64) + (y^2 - 12y + 36) = -19 + 64 + 36$. Factor the x and y expressions to get $(x + 8)^2 + (y - 6)^2 = -19 + 64 + 36$. According to the standard form, $h = -8$ and $k = 6$, so the center must be $(-8, 6)$. The correct answer is (C).
31. $\frac{42}{9}, \frac{14}{3}, 4.66$, or 4.67
The question asks for the length of a reproduction of a flag where both dimensions of the flag are multiplied by $\frac{1}{9}$. Use this information, and multiply the original length by the fraction to get $\frac{1}{9}(42) = \frac{42}{9}$. This fits in the grid-in box, so the correct answer is $\frac{42}{9}$.
32. **63** The question asks for the measure of $\angle CBF$ in the figure. The question states that $\angle CBD = \angle EBF$, so $2a - 6 = a + 9$. Add 6 to both sides to get $2a = a + 15$. Subtract a from both sides to get $a = 15$. Use