

Answers and Explanations

To The

2011 PSAT Student Bulletin

Sample Test



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The answers and explanations to questions herein are derived using the tactics and strategies found in our published PSAT textbooks or in the content of our course. In many cases, the way we get an answer may be contrary to what is taught in the classroom. Our goal is to encourage and reward students who think.

SECTION – 1 VERBAL

Sentence Completions

1. (E) **KEY WORDS: known for her, personality, but, saw bullying, had very, response**

The key words show that this is a contrast sentence. Only answer E contains two words “cheerful” and “angry,” that are opposites.

2. (C) **KEY WORD: if, of, forest, not stopped, lose, wildlife that are, locations**

The word in the first blank must mean something that is damaging to forest. This eliminates answers D and A. Answer E is out because animals that are foreign to the forest would not be there to be harmed. Answer B is out because “evolution” of the forest would be a long term natural event that could be beneficial. This leaves only answer C.

3. (C) **KEY WORDS: attributed to, but work is actually, effort, since he wrote it with**

The phrase “wrote it with” means more than one person wrote the book. Answer C, “collaborative,” means something that involves the work of more than one person.

4. (C) **KEY WORDS: demonstrators, dressed with care, project responsible image rather than**

In this contrast sentence, the first blank must go with the students being careful to dress so as to project a positive image. Answer E, “undeceived by,” makes no sense because the students deliberately dressed so as to present a responsible image. Answers D and A both mean to be “unaware of” which is the opposite of what goes in the first blank. Both of the first words in answers C and B could work in that blank. The second word of answer B is not the opposite of presenting a responsible image. The second word in answer C, “disorderly,” is the opposite of dressing responsibly, and thus is the best answer.

5. (E) **KEY WORDS: Unlike Earth’s, jet streams, narrow bands, Venus, entire planet**

In this contrast sentence, the best answer must be the opposite of jet streams being in “narrow” bands around the planet. Answers D and B are good traps because they both mean something bad for the planet. However, these words do not mean to cover completely. Answer C is out because “dwarf” means to make something look smaller by comparison. Answer A makes no sense in the sentence. This leaves answer E, “envelop,” meaning to cover completely, as the best choice.

6. (E) **KEY WORDS: To, capture, thieves, collection, selling, off a piece, over months**

The first word must mean to not get caught. This eliminates answers D and B. The first word in answer A, “monitor,” makes no sense. The word in the second blank must mean to sell off items a few at a time. The second word “appraised” in answer C means to find out the value of something and thus can be eliminated. This eliminates all the choices except answer E.

7. (A) **KEY WORDS: clever child’s imaginative excuses confirmed**

The best answer must fit the idea that the child is “clever” and “imaginative.” Most students will see that the word “ingenuity,” answer A, fits perfectly. Answers D, C, and B have nothing to do with the child being clever and can be eliminated. Some students might not know the word “indignation,” but they should still see that answer A is the best fit.

8. (D) **KEY WORDS: professor’s comments, were, purely routine**

The words in the answer choices are very difficult. Many students will not be able to narrow down the answer choices and should skip this question. Only students with a very good vocabulary will know that “perfunctory” means a quick superficial look at something, making answer D the best fit. Remind students that it is okay to skip very hard questions when they cannot eliminate at least two or three answer choices.

Reading Passages

Passage One

9. (E) Students should read lines 1-4. The “new emphasis on the individual” in line one is given as the reason for the increase in the keeping of records about art. This allowed us to have much more information about the art and the artist of the period. Therefore, the best answer must make reference to the idea that the “new emphasis” increased our knowledge about the art and artist of that era. Only answer E makes reference to preserving information about artist and their work.

10. (A) Students should read lines 8-11. These lines state that female artist worked in a wide range of subjects and scales. The examples of “miniatures to large-scale alter pieces,” are used to illustrate this point. The best answer should contain the idea that female artist worked on very diverse types and sizes of art work. Only answer A makes reference to the variety of work done by female artist.

Passage Two

11. (C) Lines 1-3 states that the feeling that television has always been around makes evaluating its impact on society difficult to determine. The best answer must reflect the idea that this assumption is a barrier to objective evaluation. Only answer C gives the idea that an “obstacle” exist.

12. (B) Students should read lines 3-9. These lines state that some changes, such as those listed, are obvious and thus easy to measure. This implies that other, more significant, changes have created by television. Only answer B states that the changes listed by the author are less “profound” than other changes that have had significant consequences.

Passage Three

13. (C) Students should read lines 1-10. In these lines, the author cites a report that shows a decline in the role of reading in our nation's culture. This is seen by the author as a significant and disturbing development. The best answer must contain the idea that this decline is a significant event. The word "noteworthy" in answer B means something significant.

14. (A) Students should read lines 11-20. The author describes the methodology used by the survey to indicate the extensive nature of the data gathering. This is done to show that the information gathered came from all groups within our society. Answer A is the only answer that contains the idea that the survey was very large and covered our society as a whole.

15. (B) In lines 78-83 the author of Passage 2 dismisses the measurements done by the survey as being of questionable value and less important than the author of Passage 1 says it is. Only answer B contains the idea that the author of Passage 2 sees the survey as being less important than the author of Passage 1.

16. (C) In the last paragraph, the author of Passage 1 sees the huge decline in the number of people reading literature as having a major impact on our nation as a whole. The author gives examples of the impact this "huge cultural transformation" will have on all areas of our society. Most students can eliminate answer E because it is the opposite of the opinion expressed by the author. Answers B and D can be eliminated because the last paragraph does not question the methodology or the thoroughness of the survey. Answer A is out because the author does not offer any "course of action" to reverse the decline. Only answer C refers to the impact on culture as a whole. It is also the only answer left after the elimination process.

17. (E) The author of Passage 2 does not believe the survey is all that significant. Therefore, the author of Passage 2 would likely feel that the conclusions reached by the author of Passage 1 are extreme. The author of Passage 2 says, in the opening paragraph, that the results of the survey are used to "alarm" and "frighten" people. This idea is found in answer E.

18. (C) The phrase "hardy perennials" refers to the fact that the author of Passage 2 sees the results of the government report, like many others, are used only to frighten the public. The question asks the students to find the answer that contains a finding that could be used in the same way. Answer E is out because it refers to a small group and would not have a major effect on the nation. Answer D is a historical study and thus would be seen as a threat to the future of the nation. Answers B and A are out because a report on the career goals or musical taste of teenagers would not be seen as having great significance for the future of the nation. Answer C is the best choice because its impact would be seen as having a greater potential to negatively impact the future of the nation.

19. (B) The information given in lines 59-66 focuses not only on the percent decline but on the fact that the decline is occurring across all groups in the nation. The best answer must focus on the fact that the decline in reading literature is occurring among all groups in our society. Only answer B, “its scope,” refers to fact that the decline is widespread.

20. (D) This is a difficult question for many students because they do not know the meaning of the word “idiosyncratic”. Without knowing this definition, most students cannot make an educated guess. Those students familiar with the definition of “idiosyncratic” know that the author is referring to that which is personal or pertains to the eccentric behavior of a few and thus cannot be used to make generalizations about large groups. This should lead students to answer D. Remind the students that skipping questions such as this often saves time and points.

21. (C) The word “coarse” has several definitions. It could mean something is crude, offensive, rough, uneven, abrasive, or not specific. The answer choices contain several possible definitions. In line 71 the author refers to fact that the findings of the survey helpful in a “bulky and coarse way.” The word “coarse” therefore means something that is not precise or specific. Students should be able to eliminate answers E and D because they make no sense when used to refer to the findings of the survey. Answer B is out because the statistics themselves may be surprising or discouraging, but they are not “offensive.” If the students know the definition of “boorish,” they know it makes no sense in the context of the passage. This leaves answer C.

22. (E) In the last statement made in Passage 2, the author indicates that the report is not of lasting significance. The author of Passage 1 believes the report is important. Thus, the best answer must show that the author of Passage 1 believes the findings of report have significant implications for the future of the nation. Answer D is out because it deals with how the report’s details were checked, not the actual findings. The author of Passage 1 does not believe that the findings are misleading. This eliminates answer C. Answers B and A reflect the view of the author of Passage 2, not that of the author of Passage 1. This leaves answer E as the best choice.

23. (D) The author of Passage 1 sees the report as something serious that indicates a decline in an important area of our culture. Using this fact, students should be able to narrow down the answer choices. The author is concerned, not sad, thus eliminating answer E. Answer C is out, because the author is concerned, which is the opposite of being complacent. The author is not defensive, thus eliminating answer B. The author of Passage 2 makes fun of the report and is, thus, more amused than surprised by the report. This leaves the students with answer D.

24. (A) The author of Passage 2, in paragraph two, points out some things not taken into account by the report. The omission of these items limits the effect of the dire conclusions made by the author of Passage 1. Answer E is out because it is the opposite of the views expressed by the author of Passage 2. Answer D is out because the author of Passage 2 does not argue for social change. Answer B is out because Passage 2 does not present historical events that lead up to the report. Answer C is a good trap. The author of Passage 2 dismisses the conclusions reached by the author of Passage 1 but does not challenge the accuracy of the statistics presented. This leaves the students with answer A.

SECTION 2 – REGULAR MATH

1. (D) – If $x = 5$, then $\sqrt{x-1} = \sqrt{5-1} = \sqrt{4} = 2$ and $(x-1)^2 = (5-1)^2 = 4^2 = 16$. The trap answer for this easy question is (C). ATQA and find the *sum* of the two expressions: $2 + 16 = 18$ or answer (D).
2. (A) – If all the numbers in circle T are multiples of 10, then they would be, for example, 10, 20, 30,...etc. If all numbers in circle N are negative, then the numbers in the shaded portion of the diagram would have to be negative numbers that are a multiple of 10. Only answer (A) is a negative number that is a multiple of 10.
3. (A) – Substitute what is given. Put 4 for ab in the equation $3abc = 24$ to get $3(4)c = 24$ or $12c = 24$. Solve for c to get $c = 2$.
4. (C) – Since a straight line has 180° , it follows that the information in the figure would translate to $4x + 40^\circ = 180^\circ$ or $4x = 180^\circ - 40^\circ$ or $4x = 140^\circ$. Solving for x , we get $x = 35^\circ$. Mark answer (C).
5. (B) – Using the tactic from our class, we solve this one in about 10 seconds. We begin with Statement III and use the result to eliminate answer choices. Statement III is $2x = 6$. We can easily see that when $x = 3$, this is true, but when $x = 2$ it is not true. We can immediately eliminate answers (E), (D) and (C) because they contain a Roman numeral III. In Statement II, we substitute $x = 3$ in the first set of parentheses and find it to equal zero (0) and in the second parentheses the same thing happens when $x = 2$. Statement II is true. The best answer *must* have a II in it. Since Answer (A) does not have a II in it, it does not have to be even tried. Eliminate it and mark answer (B).
6. (E) – The sum of the graph would be 100% of the 900 students who responded to the survey. First find the value of x by adding what is given: $72\% + 10\% + 5\% = 87\%$. Subtracting 87% from 100% yields 13% for the value of x . Therefore, 13% of 900 would be the answer: $0.13 \times 900 = 117$. Use your calculator to get this one quickly. Mark (E).
7. (E) - Note the **Clue Words** “*could be.*” We use the “Plug It In” tactic to get this one quickly. Go to answer (E) and plug in $\frac{3}{2}$ or 1.5 for t in the expression given in the question. The expression would become $10 < 3(1.5) + 7 < 13$ or $10 < 4.5 + 7 < 13$ or $10 < 11.5 < 13$. Since this is true, then t *could* equal $\frac{3}{2}$. Since we have **ATQA**, we mark (E).

8. (C) – We have not seen a “special right triangle” question for a while, and here one is! From the figure, we can see that all sides of the square are 10. With the diagonal line drawn, two *special right triangles* are created. Each has 10 as the two shorter legs and x as the hypotenuse. In a special right triangle, with two legs of equal length, the properties are s for the two legs and the hypotenuse is $\sqrt{2}s$; you might have learned it as $s, s, \sqrt{2}s$. In this figure, each special right triangle has $s = 10$. Thus, $s, s, \sqrt{2}s$ becomes $10, 10, \sqrt{2}(10)$. Answer (C) is this (in a different form of $10\sqrt{2}$).

9. (D) – The key to this question is not falling for the trap answer (B). We used the “Plug-It-In” tactic to get this one quickly. If we took 10 marbles from box B , the results would be: Box $A = 142$, Box $B = 142$, and Box $C = 146$. This seems to satisfy the question because Box C does have more marbles than each of the other two boxes. **However, is this the least number of marbles that we could transfer and still meet the requirement of the question?** Thinking about this, we plug in answer (D) and get Box $A = 142$, Box $B = 143$, and Box $C = 145$. This also fulfills the requirement of the question. Answer (D) works and is less than Answer (E). We eliminate (E). Next, we try answer (C) and get Box $A = 142$, Box $B = 144$, and Box $C = 144$. In this case, Box C does not have marbles in it than both other boxes. Thus, the least number of marbles we can transfer from Box B to Box C is 9. Mark (D).

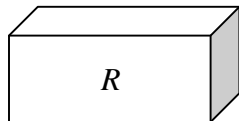
10. (C) – If the area of the shaded semicircular area is 8π , the area of the complete circle would be 16π . Using $A = \pi r^2$, we plug in what we know to get $16\pi = \pi r^2$ or $16 = r^2$ or $4 = r$. Thus, the radius of the semicircle is 4 or $t = 4$.

11. (E) – **Use the MNL to get this one!** Since there is a “one-time” charge of \$150 for artwork, we know that we have to add that to any other costs. Let’s make $x = 2$ and find the total cost of such an order. Based on what is given we would have $x(10) + 150$ or (substituting $x = 2$) $10(2) + 150 = 20 + 150$ or 170 for the total cost. Since the question asked is “total cost per T-shirt,” we divide 170 by 2 to get \$85 each (kind of expensive T-shirt, eh?). Which answer equals \$85 when $x = 2$? We begin with (E) and get $\frac{10(2) + 150}{2} = \frac{20 + 150}{2} = \frac{170}{2} = 85$. We are finished with this question and mark (E). You might wish to try the rest of the answer choices just to make sure. Meanwhile, we are off to the next question.

12. (A) - This one takes a little logic to solve. Each top number in the table is two more than the previous number and each bottom number is five more than the previous number. If we extrapolate this out to the 5th and 6th columns, we can see that the results would be 32 over 30 and 34 over 35. Thus, in every column after the 6th, the term in the top row will be less than the term in the bottom row. Therefore, the terms of the two sequences will not be equal in any of the columns in this particular table.

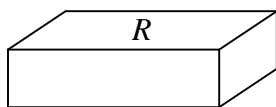
The trap is to believe that somehow the numbers on top and bottom might be divisible by 5. This is based on the last two numbers visible in the table; 30 and 25. Most students who missed this one took answer (E).

13. (B) – **Draw it!**



Key Words (Clue Words) = *could be*.

In our drawing, if one face of our rectangular solid R is known to be a rectangle that is not a square, then the most possible faces that *could be* a square would be the ends of the rectangular solid. There are two ends, thus the “*could be*” answer is (B). Obviously, our figure *could* look like this:



If it did, the answer would be “None.” Since that is not a choice, and the question asks for the “greatest number” of faces that could be a square, we have to *ATQA* with what answers are available.

Note: There are other ways to draw such a figure, but in any case, the greatest number of sides that *could be* a square is still two.

14. (B) - **Use The Drawings!** This is a complicated looking question made even more complicated by the use of good old $f(x)$. If $f(x) = 0$, then y would have to equal 0. The question asked is (paraphrasing), “Which graph does the line cross $y = 0$ only one time?” Only answer (B) has the x -axis being crossed one time. Mark (B).

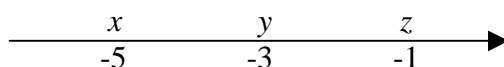
15. (D) - There are two “spinners.” The obvious answer is the product of $4 \times 6 = 24$ or 1 out of 24.

The question asks (paraphrasing), “What is the probability that the sum of the two spins will be at least 8?” We can see from the first spinner that if it landed on 1, there would be no numbers from the second spinner we could add 1 to get 8. Thus, we take a look at what “could” be the ordered pairs from both spinners that would sum 8 or more. The possibilities are: (2,6) (3,5), (4,4), (3,6), (4,5), and (4,6). Thus, there are a total of 6 possible combinations of numbers from the spinners that could sum 8 or more. Since the total number of possibilities is 24 (4 from the first spinner and 6 from the second spinner multiplied together to get 24 possibilities), the probability that the sum of the numbers in the regions where the arrows stop will be 8 is

$$\frac{6}{24} = \frac{1}{4}. \text{ Mark (D).}$$

16. (C) – This one can be confusing, so stay with us. In the world of $f(x)$ questions, the best tactic is to stick with what the value of x is and how it is used. From the table, we can see that “when x is a certain value it translates to another value for $f(x)$. For example, when x is 5 it translates to $f(x) = 6$. The question asks, “What is the value of $2f(5) - f(4)$?” From the table, we can see that $f(5) = 6$. Therefore, $2f(5)$ would be $2(6) = 12$. Again, from the table, $f(4) = 5$. This question really asks, “What is $12 - 5$?” Mark (C).

17. (E) – Ahhh, another Roman Numeral Statement question. Since this one is in the “HQs,” we will treat it with the respect it deserves. We use the **MNL** (stretching it a bit) to label the drawing according to the information given. Since xyz is a negative odd integer, we make $x = -5$, $y = -3$, and $z = -1$ and see if this works out.



From our using the **MNL and putting the facts on the figure**, we can see that xyz would be a negative integer: $(-5)(-3)(-1) = -15$. This satisfies the premise of the question.

The question states “must be true,” so we begin with Statement III to eliminate answers that are not true. Statement III would be, from our figure above, $(-3)(-1)$ or $+3$. This makes Statement III true. Our answer must have a III in it. We eliminate (B) and (A). Statement II would be $(-5) < 0$. Since this is true, we know we now have to have a II and a III in our correct (best) answer. This eliminates answer (C). In Statement I, we can see that x , y , and z are each odd integers, thus Statement I is true. The correct (best) answer must have all three statements in it. Mark (E). This is a **great** question to demonstrate:

1. Using the **MNL** and expanding it a little to satisfy what the question states.
2. Putting the facts on the figure (being careful to satisfy what is required of the question).
3. Starting with Statement III and using what you find to eliminate answer choices.

Note: Some students will mistakenly make x , y , and z equal -3 , -2 , -1 .

18. (C) - The “**KEY WORDS**” to this question are, “the sum of the areas of the unshaded regions is equal to the average of the areas of the shaded regions.” Make the shaded regions equal y° where the two diameters intersect at the center of the circle. When two straight lines intersect, the opposing angles are equal in size. Thus, in the figure, we would have $2x^\circ + 2y^\circ = 360^\circ$. Since the question states “the sum of the areas of the unshaded regions is equal to the average of the areas of the shaded regions,” this translates to $2x^\circ = (2y^\circ/2)$ or $2x^\circ = y^\circ$. Since $2x^\circ + 2y^\circ = 360^\circ$, we can substitute $2x^\circ = y^\circ$ and get $y^\circ + 2y^\circ = 360^\circ$ or $3y^\circ = 360^\circ$ or $y^\circ = 120^\circ$. From this, we can see that the sum of the two shaded areas is 240° . This means the sum of the two unshaded areas is 120° or $2x = 120^\circ$ or $x = 60^\circ$.

Alternatively, we could have just said $x^\circ + x^\circ = (y^\circ + y^\circ)/2$ or $2x^\circ = y^\circ$. Substituting $2x^\circ$ for y° in $2x^\circ + 2y^\circ = 360^\circ$ yields $2x^\circ + 2(2x^\circ) = 360^\circ$ or $2x^\circ + 4x^\circ = 360^\circ$ or $6x^\circ = 360^\circ$ or $x^\circ = 60^\circ$. Mark (C).

19. (B) - We really liked this “Time Bandit” question because it demonstrates two things:

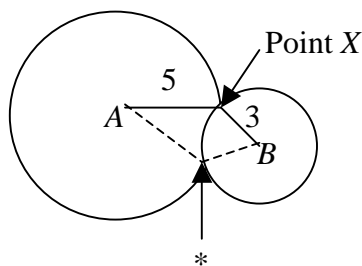
1. It can waste a lot of time for JAS if he/she writes out all the numbers.
2. The fact that only a few words are given in this question indicates that each word given must be weighed carefully.

KEY WORDS: “positive integers less than 1000.”

The phrase above is the backbone of the question. Less than 1000 means positive integers from 1 – 999. Let’s take a look at positive integers 1-99. In this set of positive integers, there would be 19 numbers with a “7” in it: 7, 17, 27, 37, 47, 57, 67, 70-79, 87, and 97. **Many students only “see” 77 and NOT “70-79.”** Thus, each set of hundred numbers up to 999, would have 19 numbers with a 7 in it. For example, 1-99 would have 19 numbers with a 7 in it; 100-199 would have 19 numbers with a 7 in it, and so on up to 900-999. The set of numbers from 700-799 would obviously have a 7 in it, meaning that there would be 100 numbers to be accounted for here. Adding up all we know, we have 9 sets of numbers, with 19 of each set, having a 7 in it. 9 times 19 equals 171 numbers with a 7 in it. All the numbers from 700-799 have a 7 in it, so this is another 100 numbers with a 7 in it. Adding 171 and 100 we get 271 numbers with a 7 in it. Subtracting 271 from 999, we get 728 that would not have a 7 in it. Mark answer (B).

Careful – There are many ways to get the trap answers on this one!

20. (B) – There are several ways to get this one, but here is what we did. We drew two circles to represent what is given:



* The only other point in the same plane that is 5 units from A and 3 units from B .

From our drawing, it can be seen that there is only one other point, in the same plane, that is 5 units from A and 3 units from B . Mark (B).

SECTION – 3 VERBAL

Instructor’s Note: The vocabulary required in several of these Sentence Completion questions is substantial. This is your opportunity to stress the importance of a strong vocabulary and what to do about guessing in this case.

Sentence Completions

25. (D) **KEY WORDS: Despite, outstanding talent, never achieved celebrity:, never, the, enjoyed by, successful entertainers**

The key words indicate that the best answer must mean that the person never got the recognition that other successful entertainers received. The first word of the best answer must mean to “get” the recognition. This eliminates answers C, B, and A. The word “simplicity” found in answer E does not go with being a successful entertainer. Both words in answer fit, making it the best choice.

26. (A) **KEY WORDS: though not:, works intently, but rarely hands them in on time**

The key words show that this is a contrast sentence. The phrase “works intently” means the first blank must be a positive word that shows the person works hard. The second word means to get things done on time. Only answers D and A have words in the second position that fit this definition. The word “astute” in answer D means to be intelligent, not to work hard, thus eliminating answer D. This leaves answer A as the best choice.

27. (A) **KEY WORDS: actor, excessively, expressing, feelings, histrionic, manner**

The vocabulary used in this question and answer choices makes this a difficult one for many students. Most students do not know that the word “histrionic” means to act in an overly dramatic way. The key words “excessively expressing feelings” gives the students this definition. However, most will not know the definition of the word “emotes” in the best answer A. Unless the students have a strong vocabulary, they will not be able to eliminate enough answers to make an educated guess and, therefore, should skip this question.

28. (B) **KEY WORDS: women, known for their:, generous even during difficult financial times**

The key words following the “:” tell the students that the best answer means to be generous. Most students know that answer D, “realism,” and answer C “candor,” do not fit this definition. At this point, many students will not be able to eliminate any of the remaining answers and will have to make an educated guess. Some students will know that answer A, “affability,” refers to being friendly and thus eliminated it. At this point, only the students with great vocabularies know that “munificence,” answer B, is the best choice because the word means to be generous.

29. (D) **KEY WORDS: Describing life among Cherokee, as woman’s account contradicted, misconceptions, about lives**

The key words show that this is a contrast sentence. Therefore, the two words in the best answer must be opposites. Most students know that the words in answer C are not opposites. This eliminates that answer. Some students will also be able to eliminate answer B for the same reason. Since the word “rustic” is not really the opposite of “pragmatic” answer E is eliminated. At this point, students will have to make a guess between answers D and A.

Few students know that “feckless,” meaning incompetent, is not the opposite of “tedious,” or that “halcyon,” calm and peaceful, is the opposite of “onerous,” something difficult. Although answer D is the best choice, getting students down to a good guess on a tough question is the best that can be done.

Reading Passages

Passage One

30. (E) Both passages focus on the difficulty of finding small planets. Only answer E mentions the point that finding small planet is hard to do. Students should also see that answers D and C are out because neither passage mentioned these areas. Answers B and A contain true statements but are not the main focus of Passage 1, nor are they mentioned in Passage 2.

31. (E) At the end of Passage 1 the author predicted that the method used to find large planets is “unlikely” to aide in finding small ones. In Passage 2, however, the successful use of the method to find a small planet makes this prediction wrong. The best answer therefore is E, because the prediction was “inaccurate,” which is nice way of saying it was wrong.

32. (A) Lines 21-24 the colleague’s statement that the method is a “leap forward into a new domain...” shows his excitement over the successful use of the method to solve the long standing problem of finding small planets. The best answer must be something positive that reflects this excitement. Answer E, “defiant,” is out because there is nothing to be against. Answer D, “wistful,” is out because it means to be melancholy and reflective. Answer C, “skeptical,” is the opposite of the views expressed in lines given. Answer B, “amused,” is out because nothing humorous is mentioned. This leaves only answer A.

33. (B) Both authors use planets in our solar system as a frame of reference as to the size of planets being searched for and the problem of find the smaller ones The best answer must mention this idea of finding planets similar in size to some of those in our solar system. Answer E is out because there are no “erroneous assumptions” made in the passages. Answers D, C, and A, are true statements but do not relate to the reason our planets are mentioned. Answer B is the best answer because it cites the real reason our planets were mentioned in the passages.

Reading Passage Two

34. (A) This is the last question students should try. Most of the passage centers on Hari's good fortune in becoming an apprentice of the watchmaker, an event that had the potential to greatly improve his life. Only answer A contains this idea that this was a "fortunate" event in Hari's life.
35. (D) Lines 1-3 show that initial reaction of the boys in the kitchen to Hari was negative. This eliminates answers C, B, and A because they are not negative responses to Hari. The word "disdain", answer E, means to have contempt for or look down upon someone. These lines show that the boys were worried that Hari was going to take away their work or food not that they looked down on him. This makes answer D, "resentment," the best choice.
36. (B) In lines 4-5, the owner was pleased with Hari. Therefore, the action described, giving Hari tea, was something nice done by the owner. Answers E, and D, are wrong because they are negative, not positive actions. Answer C, "curiosity," makes no sense in the context of the lines. Giving tea to his young worker would be an act of kindness not politeness. Therefore, answer B is the best choice.
37. (D) This question is asking for the answer that LEAST characterizes the boss, Jagu. The boss is described as a silent, hardworking, worried man who thought fondly of his old village but a person with "no gift for speech". This description eliminates all but "articulate" answer D.
38. (E) Mr. Panwallah showed Hari the inside of the clock, how it worked and what was wrong, to interest him in becoming his apprentice. Answer E is the best choice because it is the only one that contains the idea that the questions were designed to get Hari interested in learning how to fix clocks.
39. (A) In lines 27-29, the author says that the opening of the clock was like a door to a new strange house that fascinated Hari. Answer E is out because nothing was seen as "innovative." The reference had nothing to do with anything being creepy, thus eliminating answer D, "eerie." The use of the "house" reference had nothing to do with an actual "architectural oddity," thus eliminating answer C. The reference to the image of the house has nothing to do with a real place to live. This eliminates answer B. Only answer A is left.
40. (A) The repetition of the word "actually" is done to emphasize the fact that Hari could not believe this opportunity was being given to him. The problem, for many students, will be the difficulty of the words given in the answer choices. If they cannot eliminate two or more answers they should skip this question. Answer A, "incredulity," means to be amazed or astonished and is therefore the best answer.

41. (E) In the fourth paragraph, the author says Hari was so “dazed” by the offer to become an apprentice that he could not speak. The word “stunned,” answer E, best fits the description of being dazed. Many students do not know that “pensive,” answer D, means to meditate or ponder. It does not fit the description given in the paragraph. Answer C, “noncommittal,” is out because Hari responded with a nod. Answer B is wrong because “pretentious” means to be conceited and does not describe Hari at all. Hari was surprised by the offer to become an apprentice, but was not “skeptical,” which eliminates answer A.

42. (B) In the last paragraph, the author says that becoming an apprentice gave Hari hope of a future and a way out of his current difficult circumstances. This means until the watchmaker’s offer came along, Hari had little hope for a life beyond working in the kitchen. Answer E is a good trap because, in the paragraph, Hari did mention that it helped to have a little luck. However, it is clear that Hari knew his success would mainly come through hard work, not luck. This eliminates answer E. Hari did not think that an apprenticeship was possible before he met Mr. Panwallah. Therefore, answer D makes no sense and can be eliminated. Answer C is out because there is nothing in the passage that suggests Hari held this belief about businessmen. Answer A is a good trap. However, Hari was not portrayed in the passage as struggling for advancement. This leaves answer B as the best choice,

43. (B) The students need to read the first paragraph. In these lines, the author says that scientists are concerned about the large increase in the number of lobsters being caught in the last fifteen years. The author then illustrates the potential problem such an increase might cause by using the disaster that took place in the cod fishing industry when a similar increase occurred. The best answer must contain the point that the reference to the “cod fishery” is used as an example of what scientists fear might happen to the lobster industry. Answers E, D, and C are out because they do not focus on the concerns of the scientists. Answer A may be a true statement but is not the reason for the reference to the disaster to the cod fishery in New England. Only answer B shows the scientists concern over the increase in lobster catches.

44. (A) This should be the first question the students answer. Students should read lines 14-16. The word “sharp” is used to describe a sudden severe move. The best answer “acute,” answer A, has several definitions including one that is a synonym for sharp. If students don’t know this definition they can use the process of elimination to narrow down the answer choices. Answer E, “piercing,” means something is a high pitched loud sound, penetrating, or intense and therefore can be eliminated. Answer D, “caustic,” means to be sarcastic or corrosive and thus is out. Answer C, “gruff,” means to be grumpy and abrupt and therefore can be eliminated. Answer B, “shrewd,” means to be crafty or clever and thus doesn’t fit the context of the sentence. This leaves only answer A.

45. (C) Students should read lines 21-29. The author points out that most scientists rely on mathematical models designed to track fish, not lobsters. This would seem to support the lobstermen's claim that they have firsthand knowledge, making them better at evaluating lobster populations than the biologist. Answer E is a true statement but does not explain why lobstermen would know more than the biologists. Answer D is wrong because there is nothing in these lines that shows the lobstermen collected scientific data. Answer B is out because the unfounded belief that the number of lobsters will soon increase would not make their assertion better than the biologist. Answer A contains information not given in these lines and thus is out. Only answer C contains the fact that the lobstermen have firsthand knowledge of the lobster population.

46. (C) This is a fact question. Students need to read lines 26-29. These lines explain why the methods biologists use to track fish do not really apply to lobsters. The best answer, C, clearly makes this point. This should be an easy question for all students.

47. (A) The passage gives the example of how the population of cod fish was heavily damaged. Obviously, the population of fish can be over-harvested. This fact is used to explain why scientist fear the same damage could happen to lobsters. Question 43 makes this point. This question wants the EXCEPTION. Since answer A is a direct contradiction to the information presented in the first paragraph, it is the best answer.

48. (E) Students should read the last paragraph. In this paragraph, the author explains the techniques used by a "new breed" of scientist. These scientists go into the water to conduct actual lobster counts and make evaluations of lobsters based on observations, not mathematical models. Answer E is the only choice that contains the fact that actual observation of the lobsters is being conducted. Most students should get this easy fact question.

NOTE: Many students will not get to this question because they spent too much time trying to answer harder questions. Point out to students that this is why watching their time is so important.

SECTION 4 - MATH

21. (E) – If $a^2 = 4$, then $a = \pm 2$. However, since the question asks what is a^6 , it does not matter if a is ± 2 because $\pm 2^6$ either way would be $+64$. Use your calculator on this one if you don't already know that $\pm 2^6 = 64$. Mark (E).

22. (E) – One of the “Math Trivia” facts that we give in class is the “sum of the first 9 positive integers is 45” and then we ask, “What is the sum of the first 10 positive integers?” Since the sum of the first 9 positive integers is 45, the “average” would be $45 \div 9 = 5$. Mark (E).

Remember, you should have marked out “(arithmetic mean)” because it is a distracter.

23. (D) – The question asks, “Which *could be*” another corner (vertex) of this square?” There are several ways to get this one. First, you could simply draw the noted square to the left and right of the line given and determine the resulting coordinates. However, we just looked at the figure and noted that the *y-coordinate* was 2 or 6. The answer **must be** one that has a *y-coordinate* of 2 or 6. Only answer (D) fits. We marked (D).

Hint: Remember, from class, we always put x and y over any coordinates given just to remind us which is which.

24. (C) – **ATQA!** This question has few words, therefore we intuitively know that it must have a subtle trap answer...and it does! Most students who miss this one will take answer (E) because the square root of 9 is easy to get. The question asked, however, is “What is the smallest integer with a square root greater than 2?” Answers (B) and (A) immediately bite the dust. Again, we know from class that the square root of 5 is 2.2, thus 5 is the smallest integer whose square root is greater than 2. Mark (C).

Hint: For those who do not remember, we use 0-4-7-0-2-4-6-8-0-PIE to recall the square root of the numbers from 1 to 10. The number sequence above represents the digit past the decimal in the square root of 1 through 10. For example: $\sqrt{1} = 1.0$, $\sqrt{2} = 1.4$, $\sqrt{3} = 1.7$, $\sqrt{4} = 2.0$, $\sqrt{5} = 2.2$, and so on up to $\sqrt{10} = 3.16$ (which is pretty close to 3.14, so we call it PIE). (Yes, we know how to spell pi, but since this is a memory jogger, we can spell it anyway we want.) This is one of those “Math Trivia” facts we like to give students in class to help them quickly estimate the square root of numbers 1 – 10. See Q. 22 above, also. And, yes, we know you can use your calculator to do the actual computation, but we like our way better...saves the battery life of your calculator. ☺

25. (B) – **Put The Facts On The Figure!** Since $AB = BC$, the two base angles of the given triangle are equal (angles opposite sides of equal length are equal in arc). A triangle has 180° so the two base angles of the triangle would be $180^\circ - 40^\circ = 140^\circ$. Dividing 140° by 2, we get the measure of the base angles. They are 70° . So, from the figure, we can see that $y + y + 70^\circ = 180^\circ$ or $2y = 180^\circ - 70^\circ$ or $2y = 110^\circ$ or $y = 55^\circ$. Mark (B).

26. (D) – **Use the MNL to solve this one.** Make $h = 2$ and $m = 120$ (there are 60 minutes in one hour). Now ATQA – “What is m in terms of h ?” or rephrasing, “Which answer is 120 when h is 2?” Start with answer (E), eliminate it and move to answer (D) which is $60(2) = 120$. Mark (D).

27. (C) – **Use The Plug-In Tactic!** In math, the **triangle inequality** states that for any triangle, the sum of the lengths of any two sides must be greater than the length of the remaining side. The sides of the described triangle is 8, so we go to answer (E) and ask ourselves, if $b = 5$, what would the other sides be? If $b = 5$ and $a \leq b \leq c$, then c would have to be 5 or more. However, this would mean that just these two sides would sum more than the sum given for the triangle. We eliminate (E). By the same reasoning, we can eliminate answer (D); if b is 4, then c would have to be 4 or more and this sum would be 8 or more...leaving side a to be, at best, 0. Eliminate answer (D).

If $b = 3$, then side c could be 3 and side a could be 2. These numbers would sum 8. Since the question asks for the greatest value of b , we don't need to try answers (B) and (A).

28. (C) – **Use The Plug-In Tactic!** This is a **Verbal Fog** question. To show that the statement given is not true (that is, false), both values of x and y **must** be greater than 1. **A huge “gift” is given by the test-maker in the answer choices.** We can eliminate answers (D), (B) and (A) immediately. Can you see why? The reason is in these answers, one of the values given is 1 or 0. According to the given statement in the box above the question, the integers must be “greater than 1.”

Start with answer (E) and plug in what is given: $x = 4$ and $y = 3$. This would make the given inequality of $xy > x + y$ becomes $(4)(3) > (4) + (3)$ or $12 > 7$. Since this is true, it does not disprove the statement. Eliminate (E). Mark (C), it is the only one left.

Ok, ok....Answer (C) proves the statement is not true because if $x = 2$ and $y = 2$ then the inequality $xy > x + y$ would become $(2)(2) > (2) + (2)$ or $4 > 4$. Since this is not true, it proves the statement is not true.

Section 4 – The SPAs

Note: This is the first time we have ever seen 3 questions given under the directions box. This is of not particular significance, but we wonder why the test-maker did this?

29. 7150 – Kind of a “Time Bandit” to start the SPAs. “Eat the sandwich one bite at a time.” If 100 people signed up for the 5-mile run, then at \$25 each, this would have raised \$2500. If 93 people finished the run, this would have raised 93 times \$50 or \$4650. Adding these two amounts together results in \$7150. Disregard the \$ when marking your answer.

30. 1 – To get 0.607 from 6.07, we move the decimal point in 6.07 one place to the left. This is the same as multiplying 6.07 by 10^{-1} . Thus, if $0.607 = (6.07)10^{-n}$, then $-n = -1$ or $n = 1$.

31. 3100 – If $\frac{1}{4}$ of $x = 100$, then $x = 400$. If $\frac{1}{3}$ of $y = 900$, then $y = 2700$. Adding these together, we get $x + y = 400 + 2700 = 3100$.
32. 48 – **Put The Facts On The Figure!** Since the area of square $ABCD$ is 36, we put 6 on each side of it. Since the area of square $PQRS$ is 16, we put 4 on each side of it. If $MDQP$ is a rectangle with area 32, it would mean $(PQ)(MP) = 32$. Since $PQ = 4$, we substitute this value into the equation to get $(4)(MP) = 32$ or $MP = 8$. We label MP and DQ as 8. To find the area of rectangle $DCLQ$, we use what we now know from the figure: $CD = 6$ and $LQ = 8$. The area of the rectangle $DCLQ$ would be $(6)(8) = 48$.
33. 15 – The number of glazed doughnuts sold represent, from the table, 45% of the total number of doughnuts sold on that certain day. If 225 glazed doughnuts were sold on that certain day, the total number of doughnuts sold could be determined by this equation: $0.45n = 225$ or $n = 225/0.45$ or $n = 500$. Now, ATQA. 3% of 500 is the number of Coconut doughnuts sold: $(.03)(500) = 15$.
34. 110 – It can be seen from the figure that it is drawn to scale. Look at triangle DEG . This is what we will use to get this one quickly. Since parallel lines are given, we can see that a parallelogram is created: $BCD?$ (We called the unnamed point in the parallelogram “?” just for fun). Since $BCD?$ is a parallelogram, we can see that angle $CD?$ equals 108° . This means that angle EDG is 72° . Put that fact on the figure. From the figure, we can see that angle DGE is 38° . Put that fact on the figure. This means that angle DEG is 70° ($180^\circ - (72^\circ + 38^\circ) = 70^\circ$). If angle DEG is 70° , so is angle BFG . This means angle x° (BFE) would be 110° . **This one is easier to do than to describe. Just be sure to put the facts on the figure!**
35. 310, 620, 930 – This one *could* trap students if they do not read carefully. The trap answer would be 155 since 5 times 31 is 155. However, the **key word** is that the locker number we seek is **even**. Therefore, we need an **even** number that is divisible by 5 and 31 and is a **multiple** of 2 (because the question states that the locker is an even numbered one). Using this information, we can calculate $2 \times 5 \times 31$ to get 310. Since this ATQA, we marked 310. There are two other answers that ATQA. These are 620 and 930 (Can you see why?), but when we have ATQA, we move on to the next question.
36. $6/5$ or 1.2 – To get the “*minimum value*” of $\frac{12}{|x - y|}$, we can see that the bottom number would have to be as large as possible. Since it is given that x is between 0 and 5, we choose 5 for its value. Since y is between 0 and -5 , we choose -5 for its value. Using these numbers, we get $\frac{12}{|5 - (-5)|}$ or $\frac{12}{|5 + 5|}$ or $\frac{12}{10}$ or $\frac{6}{5}$ or 1.2. Mark either $6/5$ or 1.2.
37. $3/2$ or 1.5 – If the total cost of 8 hats and 5 scarves is the same as the total cost of 5 hats and 7 scarves, we can set up the following equation: $8h + 5s = 5h + 7s$. Gathering like terms, we get $3h = 2s$ or $s = 3/2h$. Thus, the cost of the scarves is $3/2$ or 1.5 each hat.
38. $1/2$ or .5 – Since the line, represented by the equation $ax + bx = 1$, intersects the y -axis where $y = 2$, the line passes through the point $(0, 2)$. Therefore, $a(0) + b(2) = 1$ or $2b = 1$ or $b = 1/2$ or .5.

SECTION 5 – Writing Skills

1. D – The original sentence is improperly joins two independent clauses (“In 1960 Maya Angelou and her husband, South African civil rights activist Vusumzi Make, moved to Egypt” and “Angelou edited the English-language weekly *The Arab Observer* there”) together with just a comma (comma splice). Choice D corrects this mistake, by turning the second clause into a dependent one by adding “where” to the beginning of it.
2. B – The underlined portion of the original sentence contains a verb tense error. Since the sentence is in past tense, this section must be replaced by the past tense “was already” (B).
3. C – The original sentence is too wordy and contains an incorrect verb form (“missing”). Choice C communicates the situation simply and uses the correct verb form “missed.”
4. E – The original sentence is a fragment because it lacks an appropriate verb phrase. Choice E provides an appropriate verb phrase “was able to predict” for the subject, Benjamin Banneker.
5. D - The original sentence is a fragment because it lacks an appropriate verb phrase for its subject, “curator.” Choice D provides an appropriate verb phrase with “announced.”
6. A – Correct as is.
7. C – The original sentence has a subject -verb agreement error. C provides an appropriate singular verb (“is”) for the singular subject (“Half Dome”)
8. B - The original sentence contains three items in a series that are not in parallel structure. Choice B corrects this error by changing the beginning of the third phrase to “basic knowledge,” which matches the adjective-noun combination of the first two items in the series.
9. D – The original sentence has a faulty structure and lacks clarity. Choice D provides the main verb “is” to carry out the action of the sentence and the conjunction “because” to establish the cause-effect relationship between the two clauses.
10. E – The original sentence is not parallel because of the unnecessary preposition “by.” E simply removes the unneeded word.
11. D – The plural subject of the original sentence “swimmers” is improperly connected with singular nouns “place” and “competitor.” Choice D corrects this by make both nouns plural.
12. C – The original improperly compares “British poetry” with “American poets” and is somewhat wordy. Choice C changes the latter to “American poetry” and is more succinct.

13. C – The opening phrase “While visiting” can't modify the subject “tree” because it's not the tree that is doing the visiting. Choice C makes “Joan” into the subject of the sentence, and thus the one visiting the Ocala National Forrest.
14. D – The original sentence has a subject-verb agreement error: The subject “exposure” can not go with the plural verb “are shown.” Choice D uses the correct singular “has been shown.” Although choice C makes this correction, the phrase “that it has” is unidiomatic.
15. E – While the underlined section of the original may at first to be correct, it eventually cause a commas splice error. Choice E changes the opening clause into a dependent one, eliminating the problem.
16. B – The original lacks parallel structure. Choice B corrects this by adding the conjunction “and” and changing the third item to the parallel form “lay.”
17. C – The word” apart” is redundant because it is already implied by “separate.” Choice C simply removes the redundancy.
18. A – Correct as is.
19. The original sentence starts with a dangling modifier. Because Lorraine Hansberry is the one “best known,” she must be the subject of the sentence, a correction only provided by C.
20. E – The original contains a faulty comparison (comparing Gabriel Garcia Marquez's literary technique with other writers, instead of the literary techniques of other writers) and a subject- verb agreement error. Choice E removes the comparison error and provides the necessary singular verb “is.’
21. A – Not parallel. The phrase “to weed” should be changed to “weeding.”
22. D – Incorrect pronoun. Because “it” refers to houses, it should be “them.”
23. E – No error.
24. E – No error.
25. A – The adverb “lyrically” is needed in place of the adjective “lyrical” to modify the verb “writes.”
26. D – Point of view error and agreement error. The pronoun “you” inappropriately shifts the point of view to second from third. It's also a singular pronoun. The plural “they” is needed to agree with the antecedent “people.”
27. A – Sentence-fragment. The verb phrase “being comprised” must be replaced with the main verb phrase “is comprised.”

28. E – No error.
29. A - “Different kinds of blood cells” don’t share a life span. Choice A needs to be changed to “different life spans.”
30. A – Verb tense error. Choice A should be “would have been happy.”
31. B – No antecedent for the pronoun “it.” The pronoun “it” should be replaced with the pronoun “this” or “this discovery.”
32. B - The plural subject “cupboards and a massive walnut chest” requires a plural verb; thus choice B should be “stand.” The inversion of the subject and verb (the verb comes first) is what may make this one tricky for some students.
33. B – Idiomatic error. The infinitive form of the verb, “to build,” is not idiomatic following the verb “suggested” and should be replaced with the gerund form, “building.”
34. E – Correct as is.
35. C – The original has a subject-verb agreement error (“spending” - “are”), which is corrected by C (“spending” - “is”).
36. D – Choice D provides the appropriate gerund “Isolating” to serve as the subject of the sentence. Also, the pronoun “yourself” agrees with the pronoun “you,” which appears twice in the sentence.
37. C – Since the members are not “literally” doing as described, the sentence must be revised. Only choice C makes sense in context.
38. B – The pronoun “they” has an unclear antecedent as is. In context, the phrase “facts learned in association with one another” is the best replacement for the pronoun “they.” It fits logically with the following verb phrase “will be more easily retrieved” and creates an appropriate contrast with the phrase “those memorized as isolated pieces of information.”
39. C - The main topic of the passage is how best to prepare for a debate tournament, but the passage touches on the larger issue of how the human memory works. A sentence about “companionship” and “mental health” is irrelevant to the passage.