



Official INeedAPencil.com

## SAT Practice Test #1

- ④ **Download this PDF** to your computer and either print this practice test or open it in a separate desktop window. Print the answer sheet to mark your answers.
  
- ④ **Dedicate 3 hours and 20 minutes** to work on this practice test, free of all interruptions and distractions. The actual SAT is 3 hours and 45 minutes of testing, but for practical purposes we have omitted Section 4, the equating section that is not counted towards your actual score. (When you take the actual SAT, the equating section is not labeled and may be any section, so do not guess one section to omit. Work hard throughout the test!)
  
- ④ **Keep a few number two pencils and a working calculator** close by. Make sure you fill in bubbles completely without making stray marks on your answer sheet. Also, use a calculator that you will use on test day so that you become very familiar with it.
  
- ④ **Use a watch or timer** to keep track of time per section. When timing yourself, try to use a device that will not make any noise because this is the rule for the real SAT. For the most realistic SAT practice, do not exceed the time limits. However, you may return to sections in which you skipped questions and review these questions after you finish your test to enhance your personal understanding.
  
- ④ **To score your test, return to the Testing Gateway of INeedAPencil.com** and simply navigate to the full-length test section. Here you can enter how many questions you answered correctly and incorrectly as well as how many questions you omitted per subject after using the provided answer key PDF to correct your test. We run your entries through the INAP scoring system and provide painless and instant SAT scoring!

# SECTION 1: ESSAY

Think carefully about the issue presented in the following excerpt and the assignment below.

**Time Limit: 25 minutes**

**Excerpt:**

With the rising cost of education in the form of college tuition, training courses and vocational programs, the competition for scholarships and financial aid is rapidly increasing. Many college financial aid offices are assisting students from historically high income brackets. Furthermore, scholarship programs are seeing unprecedented levels of interested applicants. The challenge facing these institutions is whether to award aid based on how accomplished the applicant is or how difficult it will be for the student to afford the education.

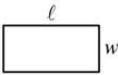
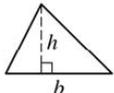
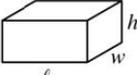
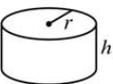
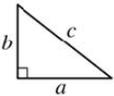
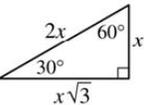
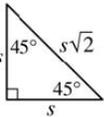
**Assignment:**

Is it better to financially reward individuals like students and employees based on how much merit the individual demonstrates instead of how much need the individual has? Plan and write an essay in which you develop your point of view on this issue. Support your position with reasoning and examples taken from your reading, studies, experience, or observations.

# SECTION 2: MATH

**Time Limit: 25 minutes, Question Count: 20**

**Directions:** For this section solve each problem and select the **best** answer choice. Fill in the corresponding circle on the answer sheet. You may use any available space for scratchwork.

Notes	<p>1. The use of a calculator is permitted.</p> <p>2. All numbers used are real numbers.</p> <p>3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not drawn to scale. All figures lie in a plane unless otherwise indicated.</p> <p>4. Unless otherwise specified, the domain of any function <math>f</math> is assumed to be the set of all real numbers <math>x</math> for which <math>f(x)</math> is a real number.</p>
Reference Information	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p><math>A = \pi r^2</math> <math>C = 2\pi r</math></p> </div> <div style="text-align: center;">  <p><math>A = \ell w</math></p> </div> <div style="text-align: center;">  <p><math>A = \frac{1}{2}bh</math></p> </div> <div style="text-align: center;">  <p><math>V = \ell wh</math></p> </div> <div style="text-align: center;">  <p><math>V = \pi r^2 h</math></p> </div> <div style="text-align: center;">  <p><math>c^2 = a^2 + b^2</math></p> </div> <div style="text-align: center;">  <p>Special Right Triangles</p> </div> <div style="text-align: center;">  </div> </div> <p>The number of degrees of arc in a circle is 360. The sum of the measures in degrees of the angles of a triangle is 180.</p>

1. If  $x + 1$  is an odd integer, which amount must be an even integer?

- A.  $-x$
  - B.  $x^2 + 1$
  - C.  $-x^2 + 1$
  - D.  $x + 3$
  - E.  $x - 1$
- 

2. If 60% of  $m$  equals  $n$ , 60% of  $6m$  is equal to which of the following in terms of  $n$  ?

- A.  $n/60$
  - B.  $n/6$
  - C.  $n$
  - D.  $6n$
  - E.  $36n$
- 

3. Two people, John and Mary, are 200 miles apart and leave at the same time to meet. They are driving towards each other at constant rates on the same straight road. John is traveling at 45 miles per hour, and Mary is traveling at 35 miles per hour. When they meet, how many miles will they be from John's house?

---

4. If  $3x - 10 = 17$ , what is the value of  $6x + 20$  ?

- A. 9
- B. 54
- C. 34
- D. 47
- E. 74

## SECTION 2: MATH

Table for Question 5:

Real Estate Closings Per Year

Year	Number of Deals Closed
2001	35,000
2002	40,000
2003	50,000
2004	70,000
2005	100,000

5. What two-year period had the greatest percentage increase in real estate deals closed?

- A. 2001-2002
- B. 2002-2003
- C. 2003-2004
- D. 2004-2005
- E. 2003-2005

---

6. Greg has a collection of 600 records. If 20% of his records are 45s, and the rest are LPs, how many LPs does he have?

- A. 120
- B. 480
- C. 360
- D. 100
- E. 270

---

7. The width of a rectangle is twice the length. If the area of the rectangle is 98, what is the width of the rectangle?

- A. 7
- B. 49
- C. 14
- D. 42
- E. 21

8. How many unique solutions satisfy the equation  $|3x - 2| = |x|$ ?

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4

## SECTION 2: MATH

Questions 9 and 10 make reference to the following function:

For all real numbers  $x$ ,  $g(x) = -2x^2 + x - 4$ .

9. What is the value of  $g(-2)$ ?

- A. 2
- B. 6
- C. 14
- D. -14
- E. -2

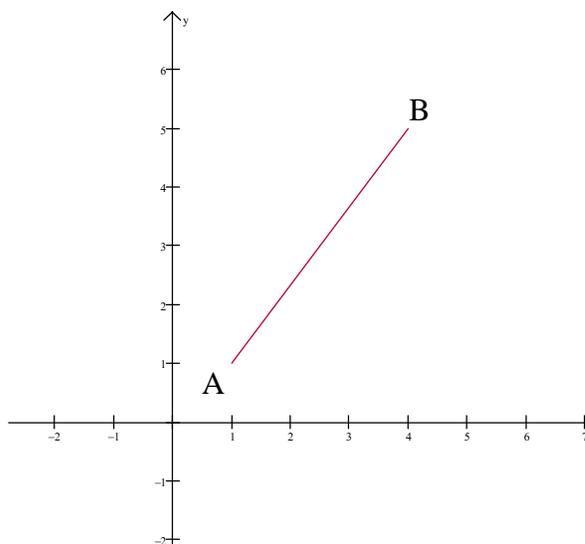
10. What is the value of  $g(1) + g(2)$ ?

- A.  $g(0)$
- B.  $g(3)$
- C.  $g(1)$
- D.  $g(-1)$
- E.  $g(2)$

11. There are 80 players at the varsity baseball tryouts. 5 players are not trying out today due to injuries. 15 players are trying out exclusively to be either a pitcher or a catcher, while 6 players are exclusively trying out to play a fielding position (all positions on the field excluding pitcher and catcher). What is the probability that a player is trying out to be a pitcher or catcher, given that he is trying out to play a field position?

- A. 0.9
- B. 0.675
- C. 90
- D. 0.1
- E. 0.72

12. What is the midpoint of  $\overline{AB}$ ?



- A. (5, 6)
- B. (2.5, 3)
- C. (1, 5)
- D. (4, 1)
- E. (3, 2.5)

13. What is the midpoint of the segment connecting the x-intercept of the line  $3x + 4y = 12$  and the point (6, 4)?

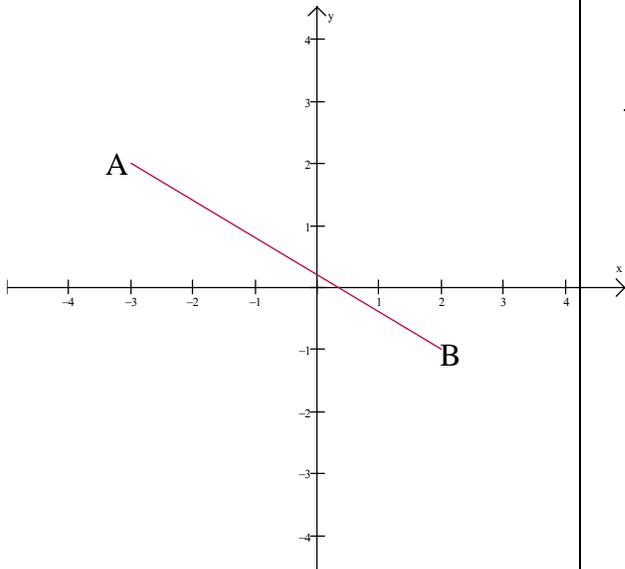
- A. (5, 2)
- B. (2, 5)
- C. (10, 6)
- D. (1, 2)
- E. (2, 1)

## SECTION 2: MATH

14. What is the slope of a line parallel to  $2x + y = 4$ ?

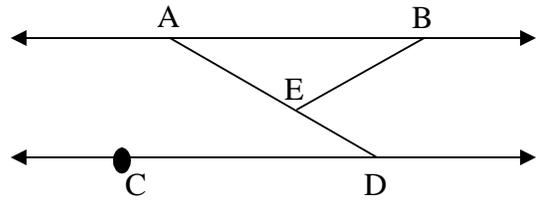
- A. 2
  - B. 4
  - C. 1
  - D. -2
  - E. -4
- 

15. What is the length of  $\overline{AB}$  to the nearest hundredth?



- A. 1.41
- B. 5.74
- C. 4.90
- D. 5.00
- E. 5.83

16. Which pair of points form a transversal?



- A. A and B
  - B. B and E
  - C. D and E
  - D. C and D
  - E. A and D
-

## SECTION 2: MATH

17. What effect would  $y = (x + 1)^2$  have on the graph of  $y = x^2$ ?

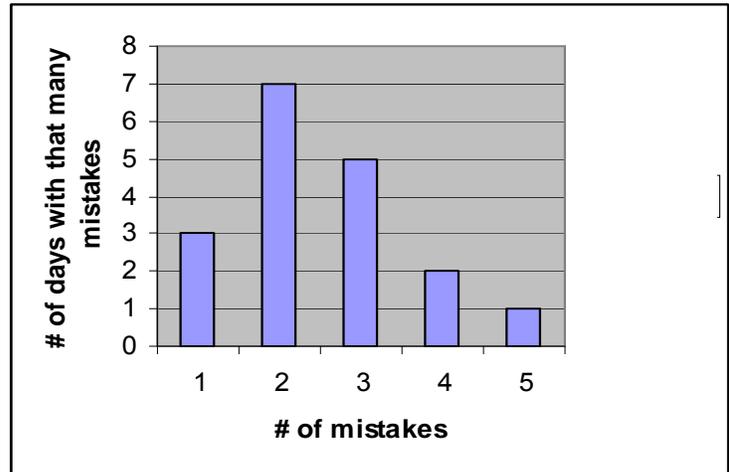
- A. Shift up 1 unit
- B. Shift down 1 unit
- C. Shift left 1 unit
- D. Shift right 1 unit
- E. No effect

---

18. You got the following scores on 3 tests: 84, 82, 98. What score must you get on the 4<sup>th</sup> test if you want to average a 90% for the 4 tests?

- A. 94
- B. 95
- C. 96
- D. 97
- E. 98

19. A company did an analysis of its production facility and came up with the following data relating the number of mistakes and the number of days that had that many mistakes occur.

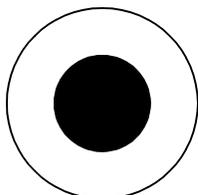


On how many days were one or two mistakes made?

- A. 3
- B. 5
- C. 7
- D. 10
- E. 12

## SECTION 2: MATH

20. A dartboard is made from one large circle with a smaller, shaded, circle in the middle. The larger circle has a radius of 2 ft. The smaller, shaded, circle has a diameter of 2 ft. If a dart is thrown at the board, what is the probability that it will land in the shaded region?



- A.  $\frac{\pi}{4}$
- B.  $\frac{1}{4}$
- C.  $\frac{1}{2}$
- D.  $\frac{\pi}{2}$
- E.  $\frac{1}{8}$

## SECTION 3: CRITICAL READING

Time Limit: 25 minutes, Question Count: 24

**Directions:** Each sentence below has one or two blanks, each blank indicating that something has been omitted. Beneath the sentence are five words or sets of words labeled A through E. Choose the word or set of words that, when inserted in the sentence, best fits the meaning of the sentence as a whole.

1. When Alex toured the historic sites and ----- castles across Europe, he was speechless and now relies on his vivid photographs to provide the amazing descriptions.

- A. downtrodden
- B. sublime
- C. ancient
- D. behemoth
- E. diverse

2. When Travis was trapped in the auditorium listening to his high school's administrator discuss the --- ----- policies about the school parking procedures, safety concerns and disciplinary system, he effortlessly fell asleep.

- A. vapid
- B. critical
- C. useless
- D. precautionary
- E. new

3. After only two months in captivity under the watch of feline experts, it is no surprise that the rare cat regressed to its ----- behavior upon initial release back into the open.

- A. aggressive
- B. tamed
- C. feral
- D. fretful
- E. skilled

4. It always makes for a memorable and amusing moment when the script used for a live television show contains errors that the proofreaders failed to ----- before the final release.

- A. maintain
- B. make
- C. expunge
- D. worsen
- E. restore

5. Sean's decision to ----- his savings to a financial manager to provide for a comfy retirement instead of blowing all the money he earned from his new job on luxuries proved that he had finally grown into a prudent and ----- man.

- A. shift...stingy
- B. transfer...economic
- C. entrust...paranoid
- D. consign...sagacious
- E. devote...hard working

6. After months of rigorous preparation for the championship basketball game, Drew felt ----- from his ----- wrist injury that kept him out of the game.

- A. invigorated...untimely
- B. jaded...debilitating
- C. disadvantaged...fortunate
- D. ambivalent...fortuitous
- E. inspired...convoluted

## SECTION 3: CRITICAL READING

7. Although many of the doctors in the hospital were ----- by the patient's curious illness, a bold nurse stepped forward with the correct -----.

- A. intrigued...diagnosis
- B. confused...occupation
- C. frightened...symptom
- D. dumbfounded...quandary
- E. stymied...assessment

8. With the proper water and sunlight exposure, your flowers will begin to ----- and you can be proud of the original beauty that your hard work and methodology -----.

- A. blossom...destroyed
- B. wither...created
- C. spread...changed
- D. grow...ruined
- E. burgeon...engendered

## SECTION 3: CRITICAL READING

**Directions:** The passages below are followed by questions based on their content; questions following a pair of related passages may also be based on the relationship between the paired passages. Answer the questions on the basis of what is stated or implied in the passages and in any introductory material that may be provided.

**Questions 9-10 are based on the following passage.**

Cities across the world are essentially blends of smaller cultural environments that lead people to have vastly different experiences. Each city typically contains a broad spectrum of dining establishments along with various art institutions like museums and theatres. Yet with all these blends of dining, art and night lives, what is the one characteristic that can distinguish a city? History. The undeniably unique history of each city provides rich traditions and a bond between the local people that overshadows any other city's *mélange* of dining and art institutions.

9. In context, which word most closely defines *mélange*?

- A. history
- B. tradition
- C. assortment
- D. opportunity
- E. brochure

10. Which of the following would the author believe is the most important city attraction or characteristic?

- A. The exquisite French restaurant in the European district
- B. The Museum of Natural History
- C. Ruins from the Berlin Wall and the local community
- D. Wrigley Field
- E. A democratic government

**Questions 11-12 are based on the following passage.**

Swimming has developed from a primal mode of movement to an advanced hobby and competitive sport. Exercising nearly every muscle group, swimming is a rigorous sport and requires intense training. In competitions swimmers typically contend for the fastest time to complete a certain distance by performing a specific swimming stroke. Also, swimmers work to build endurance and an ability to swim over long distances. Because swimming has developed into a highly intricate competitive sport, where one wrong technique can disqualify a participant, it is interesting to ponder how the sport will evolve for people in the future, either advancing into a progressive purpose or regressing to a primal mode of movement.

11. The structure of this passage could be best described in what way?

- A. An activity narrowed to a specific purpose and expanded to consider future implications.
- B. An activity narrowed to a specific purpose and expanded to consider future deviations.
- C. A hypothesis tested against certain conditions, developed into a larger thesis.
- D. An activity and its purposes are explained.
- E. A supposition of the prospect of an activity, analyzed for viability

## SECTION 3: CRITICAL READING

12. Which of the following situations would fulfill the author's prophecy for swimming?

- A. Humans settling on the moon use swimming techniques to move through space.
- B. Swimming remains a competitive Olympic sport.
- C. Animals, including amphibians, begin to swim instinctively upon birth, as a dominant genetic trait.
- D. People swim in home and community pools to relax and exercise.
- E. Fish begin swimming at unprecedented speeds and extend the average life span.

**Questions 13-24 are based on the following passage.**

**The following is an excerpt from a compilation of fables published by Thomas Bulfinch during the 19<sup>th</sup> century.**

Prometheus was one of the Titans, a gigantic race, who inhabited the earth before the creation of man. To him and his brother Epimetheus was committed the office of making man, and providing him and all other animals with the faculties necessary for their preservation. Epimetheus undertook to do this, and Prometheus was to overlook his work, when it was done. Epimetheus accordingly proceeded to bestow upon the different animals the various gifts of courage, strength, swiftness, sagacity; wings to one, claws to another, a shelly covering to a third, etc. But when man came to be provided for, who was to be superior to all other animals,

Epimetheus had been so prodigal of his resources that he had nothing left to bestow upon him. In his perplexity he resorted to his brother Prometheus, who, with the aid of Minerva, went up to heaven, and lighted his torch at the chariot of the sun, and brought down fire to man. With this gift man was more than a match for all other animals. It enabled him to make weapons wherewith to subdue them; tools with which to cultivate the earth; to warm his dwelling, so as to be comparatively independent of climate; and finally to introduce the arts and to coin money, the means of trade and commerce. Woman was not yet made. The story (absurd enough!) is that Jupiter made her, and sent her to Prometheus and his brother, to punish them for their presumption in stealing fire from heaven; and man, for accepting the gift. The first woman was named Pandora. She was made in heaven, every god contributing something to perfect her. Venus gave her beauty, Mercury persuasion, Apollo music, etc. Thus equipped, she was conveyed to earth, and presented to Epimetheus, who gladly accepted her, though cautioned by his brother to beware of Jupiter and his gifts. Epimetheus had in his house a jar, in which were kept certain noxious articles, for which, in fitting man for his new abode, he had had no occasion. Pandora was seized with an eager curiosity to know what this jar contained; and one day she slipped off the cover and looked in. Forthwith there escaped a multitude of plagues for

## SECTION 3: CRITICAL READING

hapless man,--such as gout, rheumatism, and colic for his body, and envy, spite, and revenge for his mind,--and scattered themselves far and wide. Pandora hastened to replace the lid! but, alas! the whole contents of the jar had escaped, one thing only excepted, which lay at the bottom, and that was HOPE. So we see at this day, whatever evils are abroad, hope never entirely leaves us; and while we have THAT, no amount of other ills can make us completely wretched.

Another story is that Pandora was sent in good faith, by Jupiter, to bless man; that she was furnished with a box, containing her marriage presents, into which every god had put some blessing. She opened the box incautiously, and the blessings all escaped, HOPE only excepted. This story seems more probable than the former; for how could HOPE, so precious a jewel as it is, have been kept in a jar full of all manner of evils, as in the former statement?

13. Epimetheus, in his creation of all animals before man, could best be described as

- A. benevolent
- B. impetuous
- C. meticulous
- D. evil
- E. responsible

14. As used in this passage, "prodigal" may mean any of the following terms EXCEPT

- A. reckless
- B. extravagant
- C. improvident
- D. wasteful
- E. prudent

15. In the context of this story, what is the significance of Prometheus' audacity?

- A. This provides a reason for man to later be endowed with woman.
- B. His bravery provides man with fire.
- C. The fire creates opportunities for man that no other animals had.
- D. With fire, man regained superiority over all animals/
- E. Such audacity provoked Jupiter into providing the instrument that would release the world's evils.

16. The primary function of the second paragraph is to

- A. provide the reader with a more likely conclusion to the story of Pandora
- B. create a contrast in the story about the Pandora so that the reader has an unbiased premise on which he may draw his own conclusions
- C. support the claims made in the first paragraph
- D. restore Jupiter's reputation
- E. convey a sense of hope for humanity

## SECTION 3: CRITICAL READING

17. The passage states that the Titans created animals to

- A. provide an additional source of resources to sustain their race
- B. allow the animals existence and protection on earth
- C. supersede man in power
- D. suffer from evils in the world
- E. to provide man with a subservient entity

18. All of the following choices demonstrate how the author created Prometheus as the dominant brother of Epimetheus EXCEPT

- A. Prometheus was introduced first in the story.
- B. Epimetheus made the hasty mistake of not providing for man
- C. In his moment of perplexity, Epimetheus turned to his brother Prometheus
- D. Upon her completion, the woman was conveyed to Epimetheus
- E. Prometheus daringly ventured to heaven, stole from the sun and brought fire down to man

19. According to the first paragraph, which character could be considered the greatest victim?

- A. Jupiter
- B. Man
- C. Prometheus
- D. Epimetheus
- E. Pandora

20. What was the immediate consequence of Prometheus' daring adventure?

- A. Animals were destined to suffer.
- B. Man became superior to animals.
- C. Prometheus would feel the wrath of Jupiter
- D. Blessings were placed in Pandora's box
- E. Woman could now exist

21. Considering the entirety of this passage, which term best describes Jupiter?

- A. spiteful
- B. benevolent
- C. iniquitous
- D. powerful
- E. decent

22. The term to best describe the qualities that Pandora was endowed with is

- A. pragmatic
- B. abstract
- C. vain
- D. aesthetic
- E. essential

## SECTION 3: CRITICAL READING

23. The parable that this passage embodies conveys a sentiment of

- A. caution
- B. optimism
- C. revulsion
- D. guilt
- E. tension

24. If given more credibility, which of the following statements from the passage would most significantly weaken the author's position about this parable?

- A. Epimetheus was "cautioned by his brother to beware of Jupiter and his gifts."
- B. "Pandora was seized with an eager curiosity to know what this jar contained..."
- C. "...no amount of other ills can make us completely wretched."
- D. The Titan Prometheus "went up to heaven, and lighted his torch at the chariot of the sun."
- E. Man "...was to be superior to all other animals..."

## SECTION 4: EQUATING (SKIP THIS!)

ONE SECTION ON EACH SAT IS USED TO TEST OUT FUTURE QUESTIONS. WE'LL SPARE YOU THAT PLEASURE; CONTINUE WORKING, BUT REMEMBER THAT THE EQUATING SECTION IS NOT LABELED ON THE REAL SAT AND MAY NOT BE SECTION 4!!!

## SECTION 5: CRITICAL READING

Time Limit: 25 minutes, Question Count: 24

**Directions:** Each sentence below has one or two blanks, each blank indicating that something has been omitted. Beneath the sentence are five words or sets of words labeled A through E. Choose the word or set of words that, when inserted in the sentence, best fits the meaning of the sentence as a whole.

1. Authors during the eighteenth century were often ----- folks, who interacted with a variety of people, socializing with whomever they found intriguing.

- A. diligent
- B. creative
- C. gregarious
- D. intellectual
- E. iniquitous

2. Wanting to start anew in her construction of a prize-winning card house, Sarah chose to ----- her current house, take a break and try to build it again from scratch.

- A. mend
- B. dissemble
- C. refine
- D. dismantle
- E. design

3. When the island country successfully provided universal healthcare and education for its citizens, it received sincere ----- for achieving an ----- society.

- A. criticism...oppressive
- B. praise...opportunistic
- C. interest...basic
- D. concern...isolated
- E. adulation...egalitarian

4. Soft drinks are marketed to the public as ----- treats; however, the ----- effects of some drinks on the human body have left many consumers disgruntled.

- A. delicious...beneficial
- B. innocuous...corroding
- C. rare...necessary
- D. refreshing...expected
- E. unhealthy...detrimental

5. By not answering the calls of bill collectors Zoe was ----- her credit card debt and compromising her -----.

- A. decreasing...ethics
- B. bilking...integrity
- C. reducing...debt
- D. augmenting...malice
- E. ruining...morals

## SECTION 5: CRITICAL READING

**Directions:** The passages below are followed by questions based on their content; questions following a pair of related passages may also be based on the relationship between the paired passages. Answer the questions on the basis of what is stated or implied in the passages and in any introductory material that may be provided.

**Questions 6-9 are based on the following passages.**

### Passage 1

Spending and saving money wisely is an important skill for teenagers to learn. By learning financial responsibility at a young age, teenagers will preparedly transition into the daunting world of bank accounts and credit cards. With an advanced understanding of APRs (Annual Percentage Rates) and annual fees, individuals can avoid common pitfalls by misallocating funds or suffering from unnecessary charges. Also, by taking hold of credit early, individuals can build up strong credit records for financing major purchases in the future. Moreover, self-esteem develops significantly when teenagers effectively manage their own money.

### Passage 2

Teenagers have the opportunity to develop their financial independence while still in high school. By opening a personal savings account with the local bank, one can begin to put money away for the future and establish a financial record. Also it is convenient to use a debit card connected with your bank account. Next one can apply and begin to use a credit card with a minimal credit line. By making small purchases and consistently making payments on time, individuals will begin to see

improvements in their credit score. Nevertheless, one must be prudent before taking any of these measures in order to avoid financial scams, credit card fraud or personal debt. Another educational and possibly lucrative method of financial involvement is through investment in forms such as stocks and bonds.

6. It can be inferred from Passage 1 that

- A. financial services companies intend to deceive clients, especially young adults.
- B. teenagers do not have the skills to be financially independent.
- C. the financial realm is challenging and involves high stakes.
- D. financial responsibility is difficult when individuals are older.
- E. becoming involved in financial matters early guarantees success.

7. Which of the following actions would most likely be supported by both authors?

- I. Opening and saving money in a Roth IRA
  - II. Using multiple credit cards for all your purchases to increase credit involvement
  - III. Purchasing penny stocks that can return high dividends through high volumes
- A. I only
  - B. II only
  - C. III only
  - D. I and III
  - E. I, II and III

## SECTION 5: CRITICAL READING

8. Both of the passages support which of the following statements about financial responsibility?

- A. Early involvement in finances can lead to significant debt and money problems
- B. Financial responsibility instills self-esteem in teenagers
- C. Financial services companies have many intricate policies and products
- D. Teenagers should be active in developing financial responsibility and not depend on parents
- E. Financial responsibility demands a gradual learning process

9. The statement made about “financial scams, credit card fraud or personal debt” in Passage serves to

- A. deter individuals from allocating funds in various vehicles.
- B. emphasize the dangers of becoming financially independent.
- C. caution individuals against drowning in credit card debt.
- D. educate individuals about the time and patience financial independence requires.
- E. slander financial services companies.

## SECTION 5: CRITICAL READING

Questions 10-15 are based on the following passage.

The following is an excerpt from the beginning of "Love among the Chickens," a novel written by P.G. Wodehouse in England during the early 1900s.

Mr. Jeremy Garnet stood with his back to the empty grate--for the time was summer--watching with a jaundiced eye the removal of his breakfast things.

"Mrs. Medley," he said.

"Sir?"

"Would it bore you if I became auto-biographical?"

"Sir?"

"Never mind. I merely wish to sketch for your benefit a portion of my life's history. At eleven o'clock last night I went to bed, and at once sank into a dreamless sleep. About four hours later there was a clattering on the stairs which shook the house like a jelly. It was the gentleman in the top room--I forget his name--returning to roost. He was humming a patriotic song. A little while later there were a couple of loud crashes. He had removed his boots. All this while snatches of the patriotic song came to me through the ceiling of my bedroom. At about four-thirty there was a lull, and I managed to get to sleep again. I wish when you see that gentleman, Mrs. Medley, you would give him my compliments, and ask him if he could shorten his program another night. He might cut out the song, for a start."

"He's a very young gentleman, sir," said Mrs. Medley, in vague defense of her top room.

"And it's highly improbable," said Garnet, "that he will ever grow old, if he repeats his last night's performance. I have no wish to shed blood wantonly, but there are moments when one must lay aside one's personal prejudices, and act for the good of the race. A man who hums patriotic songs at four o'clock in the morning doesn't seem to me to fit into the scheme of universal happiness. So you will mention it to him, won't you?"

"Very well, sir," said Mrs. Medley, placidly.

On the strength of the fact that he wrote for the newspapers and had published two novels, Mrs. Medley regarded Mr. Garnet as an eccentric individual who had to be humored. Whatever he did or said filled her with a mild amusement. She received his daily harangues in the same

## SECTION 5: CRITICAL READING

spirit as that in which a nurse listens to the outpourings of the family baby. She was surprised when he said anything sensible enough for her to understand.

10. According to the passage, what can you infer is Mr. Garnet's full-time occupation?

- A. night watchman
- B. magazine editor
- C. property owner
- D. novelist
- E. farmer

11. Based on Mr. Garnet's dialogue and Mrs. Medley's assessment, which of the following best describes Mr. Garnet's speech style?

- A. articulate
- B. verbose
- C. colloquial
- D. curt
- E. didactic

12. The gentleman in the top room commits all of the following grievances that upset Mr. Garnet EXCEPT

- A. whistling a patriotic song
- B. loudly placing his boots on Mr. Garten's floor
- C. disruptively moving upwards past Mr. Garnet's room
- D. producing loud crashes
- E. reaching his room around 3 o'clock in the morning

## SECTION 5: CRITICAL READING

13. What is the author's purpose for having Mr. Garten instruct Mrs. Medley to give the young man his compliments upon initiating the conversation?

- A. to illustrate Mr. Garten's desire for a companion
- B. to hint at Mr. Garten's need for a protagonist for his next novel
- C. to characterize Mr. Garten as one who will compromise his principles to achieve an end
- D. to demonstrate Mr. Garten's kind nature
- E. to adhere to social standards of conversation

14. Based on the surrounding context, what is the closest meaning of "returning to roost?"

- A. coming home
- B. going to tend to chickens
- C. fixing up the barn
- D. arriving late
- E. waking up at the crack of dawn

15. The author of this passage primarily characterizes the landlady Mrs. Medley as

- A. overbearing.
- B. condescending.
- C. appeasing.
- D. ignorant.
- E. subservient.

## SECTION 5: CRITICAL READING

Questions 16-24 are based on the following passage.

The following excerpt comes from a mystery called The Abandoned House written by Wadsworth Camp.

The night of his grandfather's mysterious death at the Cedars, Bobby Blackburn was, at least until midnight, in New York. He was held there by the unhealthy habits and companionships which recently had angered his grandfather to the point of threatening a disciplinary change in his will. As a consequence he drifted into that strange adventure which later was to surround him with dark shadows and overwhelming doubts.

Before following Bobby through his black experience, however, it is better to know what happened at the Cedars where his cousin, Katherine Perrine was, except for the servants, alone with old Silas Blackburn who seemed apprehensive of some sly approach of disaster.

At twenty Katherine was too young, too light-hearted for this care of her uncle in which she had persisted as an antidote for Bobby's shortcomings. She was never in harmony with the moldy house or its surroundings, bleak, deserted, unfriendly to content.

Bobby and she had frequently urged the old man to give it up, to move, as it were, into the light. He had always answered angrily that his ancestors had lived there since before the Revolution, and that what had been good enough for them was good enough for him. So that night

Katherine had to hear alone the sly stalking of death in the house. She told it all to Bobby the next day--what happened, her emotions, the impression made on her by the people who came when it was too late to save Silas Blackburn.

She said, then, that the old man had behaved oddly for several days, as if he were afraid. That night he ate practically no dinner. He couldn't keep still. He wandered from room to room, his tired eyes apparently seeking. Several times she spoke to him.

"What is the matter, Uncle? What worries you?"

He grumbled unintelligibly or failed to answer at all.

She went into the library and tried to read, but the late fall wind swirled mournfully about the house and beat down the chimney, causing the fire to cast disturbing shadows across the walls. Her loneliness, and her nervousness, grew sharper. The restless, shuffling footsteps stimulated her imagination. Perhaps a mental breakdown was responsible for this alteration. She was tempted to ring for Jenkins, the butler, to share her vigil; or for one of the two women servants, now far at the back of the house.

## SECTION 5: CRITICAL READING

16. Bobby Blackburn stayed in New York because

- A. there was an important business meeting that he had to attend the next day.
- B. his grandfather was angry with him.
- C. he could not resist the allure of alcohol.
- D. it was the only place for him to offer protection to his family.
- E. he was on vacation.

17. The mood of this passage can best be described as

- A. candid
- B. ominous
- C. uplifting
- D. resentful
- E. ambiguous

18. Bobby and Katherine both

- A. had something to do with the murder of their grandfather.
- B. have driven Silas to take his own life.
- C. have fallen into moral traps.
- D. appreciate literature and high society.
- E. take interest in Silas' existence.

19. In context what is the meaning of "content" in the sentence that begins "She was never in harmony...?"

- A. substance
- B. the internal material
- C. the subject matter
- D. gaiety
- E. tradition

20. Considering that Silas had "behaved oddly" and "grumbled intelligibly", among other details, indicates that Silas

- A. was enduring severe health problems that affected his mind and body.
- B. became frustrated over the matter of settling his will.
- C. stayed angry at Bobby for his vices.
- D. was aware of his impending fate.
- E. thought Katherine was incapable of caring for him and that the servants were inadequate humans.

21. The significance of the personification used in the sentence that begins "So that night Katherine had to..." is to hear alone the sly stalking of death in the house"

- A. bring death to life and add tension to the scene.
- B. create a new character to add breadth to the mystery.
- C. tell grandfather that death is coming soon
- D. warn Bobby that he needs to return home soon
- E. provide a more complete description of the setting

## SECTION 5: CRITICAL READING

22. Readers are being exposed to an account of Silas' death by

- A. an omniscient observer
- B. Bobby
- C. a limited third person
- D. Silas
- E. a police officer

23. Katherine's treatment of her grandfather most clearly differs from Bobby's treatment because Bobby is primarily

- A. generous
- B. daring
- C. an older sibling with more responsibilities
- D. self-interested
- E. upset with his grandfather and seeks isolation

24. The author of this passage would most likely agree that

- A. Bobby absolutely disregarded his grandfather and wanted nothing to do with him.
- B. Silas was unaware of his imminent doom.
- C. Katherine thought that she was well suited to care of her grandfather.
- D. the servants were critical for the deteriorating fate of Silas.
- E. Family lasts forever and will always be there for you.

## SECTION 6: WRITING

Time Limit: 25 minutes, Question Count: 35

**Directions:** The following sentences test correctness and effectiveness of expression. Part of each sentence or the entire sentence is underlined; beneath each sentence are five ways of phrasing the underlined material. Choice A repeats the original phrasing; the other four choices are different. If you think the original phrasing produces a better sentence than any of the alternatives, select choice A; if not, select one of the other choices. In making your selection, follow the requirements of standard written English; that is, pay attention to grammar, choice of words, sentence construction, and punctuation. Your selection should result in the most effective sentence—clear and precise, without awkwardness or ambiguity.

1. Sally claims that she supports environmentally-conscious businesses and the guidelines that they adhere to.

- A. and the guidelines that they adhere to.
- B. and the guidelines to which they adhere.
- C. and the guidelines they adhere to.
- D. and the guidelines they adhere.
- E. and the guidelines by which they adhere.

2. Every time Mr. Holland visits the museum with his children he feels terrified when seeing the stairs when he was a child he fell down.

- A. the stairs when he was a child he fell down.
- B. himself falling down as a child.
- C. the stairs down which he fell as a child.
- D. the stairs he fell down like a child.
- E. himself as a child falling down.

## SECTION 6: WRITING

3. After all of the customers left, the store manager stayed behind to check the inventory while the cashier separated the dollar bills of the coins.

- A. while the cashier separated the dollar bills of the coins.
- B. during the time period when the cashier separated dollars bills and coins.
- C. while the coins and dollar bills were separated from each other by the cashier.
- D. while the cashier separated the dollar bills from the coins.
- E. while the cashier separated the dollar bills with the coins.

4. The professor declared that the final exam would separate the men from the boys and the women from the girls.

- A. separate the men from the boys and the women from the girls.
- B. separate the men and boys and girls and women.
- C. separate the men through the boys and the girls through the women.
- D. separate: men and boys, women from girls.
- E. separate the men and women among the boys and girls.

5. Students planning on becoming doctors should understand that by the time they have completed medical school, which takes many years and requires unwavering dedication, many of their other friends will finish school and start families.

- A. many of their other friends will finish school and start families.
- B. many of their other friends finished school and started families.
- C. many of their other friends will have finished school and started families.
- D. many of their other friends has finished school and started families.
- E. many of their other friends were finished with school and started families.

6. Aware of next week's deadline for her students' college applications, generic letters of recommendation are all that the teacher can write.

- A. generic letters of recommendation are all that the teacher can write.
- B. generic letters of recommendation were all that the teacher could write.
- C. a generic letter of recommendation was all that the teacher could write.
- D. the teacher can only write generic letters of recommendation.
- E. the teacher only wrote generic letters of recommendation.

## SECTION 6: WRITING

7. Norah told her mother that the whole box of cookies were eaten by the guest's little boy when the guest was touring the house.

- A. whole box of cookies were eaten by the guest's little boy
- B. whole box of cookies will have been eaten by the guest's little boy
- C. guests' little boy ate the whole box of cookies.
- D. whole box of cookies was eaten by the guests' little boy.
- E. whole box of cookies was eaten by the guest's little boy.

8. Since they served large parties at the restaurant, the waiters could not possibly try to have worked faster without sacrificing the quality of customers' dining experiences.

- A. have worked faster without sacrificing the quality of customers' dining experiences.
- B. work faster without sacrificing their quality.
- C. work faster without sacrificing the quality of customers' dining experiences.
- D. be working faster without sacrificing their quality.
- E. work faster without lessening the quality of customers' dining experiences.

9. Now called demand money, the paper currency notes that circulated during the American Civil War were not only called treasury notes but referred to as greenbacks.

- A. referred to as greenbacks.
- B. it was called greenbacks, too.
- C. also referred by greenbacks.
- D. also called greenbacks.
- E. also greenbacks.

10. A natural reservoir located behind Parker Dam, on the border between Colorado and Arizona rests Lake Havasu.

- A. on the border between Colorado and Arizona rests Lake Havasu.
- B. Lake Havasu rests on the border between Colorado and Arizona.
- C. Colorado and Arizona lie on the border of Lake Havasu.
- D. on the border between Colorado and Arizona Lake Havasu rests.
- E. Lake Havasu's border lies on Colorado and Arizona.

11. In biology, scientists have proven that large skeletal muscle fibers compose countless myocytes, which are microscopic muscle cells.

- A. compose countless myocytes, which are muscle cells.
- B. are comprised of myocytes, which are microscopic muscle cells.
- C. have comprising countless myocytes, which are microscopic muscle cells.
- D. will have comprised countless myocytes.
- E. compose countless myocytes, that are microscopic muscle cells.

## SECTION 6: WRITING

**Directions:** The following sentences test your ability to recognize grammar and usage errors. Each sentence contains either a single error or no error at all. No sentence contains more than one error. The error, if there is one, is underlined and lettered. If the sentence contains an error, select the one underlined part that must be changed to make the sentence correct. If the sentence is correct, select choice E. In choosing answers, follow the requirements of standard written English.

12. After spending eight weeks of summer playing and relaxing, the children  
A  
knew that the beginning of the school year was eminent. No error.  
B C D E

13. Some historians believe that the oppressive forces used during the peak of  
imperialism revived gorilla warfare, a form of combat which involves small  
A B C  
groups of fighters that strike the enemy through surprise attacks. No error.  
D E

## SECTION 6: WRITING

14. Since the warriors had brutally abused and murdered their ancestors years ago, the habitants of the island felt compelled to carry out hostel acts against the warriors when they returned to the island. No error.

A  
B  
C  
D  
E

15. The idol construction workers were sitting around tossing pebbles, whistling and wasting their time. No error.

A  
B  
C  
D  
E

## SECTION 6: WRITING

16. If Jane had collected more money then she would of been able to buy

A

B

enough tickets for the entire group. No error.

C

D

E

17. Last week the Drug Enforcement Agency seized a large shipment of elicit

A

B

C

drugs and is now working to track down other criminals involved with drug

D

trafficking. No error.

E

## SECTION 6: WRITING

18. Knowing that the deadline for her student's application was approaching, the  
A B C

teacher said that she would try and finish the letter of recommendation as soon  
D

as possible. No error.  
E

19. When Louis arrogantly declared that he would easily become a wealthy  
A

entrepreneur before he graduated from college, his teacher told him that he  
B

needed to gain some incite into the world of business and understand its many  
C D

challenges. No error.  
E

## SECTION 6: WRITING

20. It is unlikely that the automobile dealership will wave your service charge  
A B C  
even if you tell them that you have bought cars from them before. No error.  
D E

21. The doctor rose to an imminent position as chief surgeon at the hospital after  
A B C  
years of hard work and dedication to his patients. No error.  
D E

## SECTION 6: WRITING

22. Although she is now an eminent lawmaker on Capitol Hill, the senator had to study legislative precedents and learn from politicians of the past to earn the position she holds today. No error.

A B C D E

23. John Rockefeller, who was very conscious of efficiency, made sure resources never sat idle and productivity was always maximized. No error.

A B C D E

## SECTION 6: WRITING

24. Nicole's cheerful spirit and humorous anecdotes never fail to illicit feelings of joy and amusement. No error.

A B C  
D E

25. I know that I would of been hired for the position if I had dressed more professionally and arrived on time. No error.

A B C  
D E

## SECTION 6: WRITING

26. When I looked for Jessica at the party, I noticed that she was already  
A B C  
standing between several of her friends from the basketball team. No error.  
D E

27. Due to his extensive list of accomplishments, Samir is between the most  
A B  
qualified applicants for the research grant. No error.  
C D E

## SECTION 6: WRITING

28. In the line for school lunch, Linda was standing among her two best friends,  
A B C

Sarah and Alyssa. No error.  
D E

29. Jennifer claimed that she placed her test paper among the other answer  
A B C

sheets that were already piled on the desk. No error.  
D E

## SECTION 6: WRITING

**Directions:** The following passage is an early draft of an essay. Some parts of the passage need to be rewritten. Read the passage and select the best answers for the questions that follow. Some questions are about particular sentences or parts of sentences and ask you to improve sentence structure or word choice. Other questions ask you to consider organization and development. In choosing answers, follow the requirements of standard written English.

(1) They say that college will be the four best years of your life. (2) When I heard this, I truly wanted to embrace the process of making the smartest decision about which college to attend. (3) With parents who wanted me to stay nearby and having only a home garden with as many money trees as magical beanstalks, I realized that location and expenses were two major factors in my decision. (4) I also was very interested in the academic rigor of my prospective schools and the post-graduation job opportunities.

(5) As an aspiring female entrepreneur, I wanted to attend a number of universities along the east coast that offered strong undergraduate business programs. (6) However, this was a far cry from my cozy home in Daytona Beach, Florida and would mean a difficult adjustment to a frigid climate and a faster pace of life. (7) Furthermore, the costs of these schools were through the roof, so I needed plenty of scholarships. (8) If I stayed in-state for school, I would qualify for financial aid that would subsidize the cost of my tuition, and I would be able to enjoy the sunny weather for another four years. (9) Everyone knows that the best social lives follow the palm trees. (10) I would be able to party and still get a diploma from a decent college! (11) Florida colleges also have a large number of international students.

(12) Yet as the May 1<sup>st</sup> college decision deadline approached rapidly, I realized that it's wrong to just focus on the easy way out and stay in one place. (13) I had worked hard for four years of high school, so now was not the time to settle. (14) When the deadline arrived in May, I had decided to pursue my dreams of starting my own business by studying entrepreneurship at an elite university in the northeast that would meet my needs. (15) I decided to take out loans to cover the cost of my education because college is a priceless experience.

## SECTION 6: WRITING

30. Which of the following changes is the best way to replace the underlined portion of sentence 3 (reproduced below)?

*With parents who wanted me to stay nearby and having only a home garden with as many money trees as magical beanstalks, location and expenses were two major factors in my decision.*

- A. have to stay nearby and having only
- B. being staying nearby and having only
- C. being staying nearby and had only
- D. stay nearby and had only
- E. stay near by and having only

31. Which of these words would be most logical to insert at the beginning of Sentence 9?

- A. Besides,
- B. However,
- C. Of course,
- D. Glaringly,
- E. Dubiously,

32. What is the best way to combine the underlined portion of sentence 9 and sentence 10?

Everyone knows that the best social lives follow the palm trees. I would be able to party and still get a diploma from a decent college!

- A. palm trees—I would be
- B. palm trees, so I would be
- C. palm trees, however, I would be
- D. palm trees; nevertheless, I would be
- E. palm trees, consequently, I would be

33. In context, which of the choices below would be the best addition to follow "...international students." in sentence 10?

- A. (As it is now)
- B. ;this would provide a critical network of diverse individuals if I pursued global entrepreneurship.
- C. –international students will be detrimental to my college experience.
- D. ,which makes Florida a better social location.
- E. , but this number is expected to decrease in future years with the United States government creating more rigorous immigration and student visa regulations.

## SECTION 6: WRITING

34. Which of the following sentences is the most out of place?

- A. Sentence 3
- B. Sentence 5
- C. Sentence 13
- D. Sentence 14
- E. Sentence 15

35. In order to provide full closure on the writer's choice for college, a paragraph should have been included on which of the following topics?

- A. How the writer reconciled the problems of not going to an in-state college
- B. How the writer paid for her college expenses
- C. How the writer's parents felt about her college decision
- D. How the writer felt after graduating from her selected college
- E. How the writer was received when first arriving at college

# SECTION 7: MATH

**Time Limit: 25 minutes, Question Count: 18**

**Directions:** For this section solve each problem and select the **best** answer choice. Fill in the corresponding circle on the answer sheet. You may use any available space for scratchwork.

Notes

1. The use of a calculator is permitted.

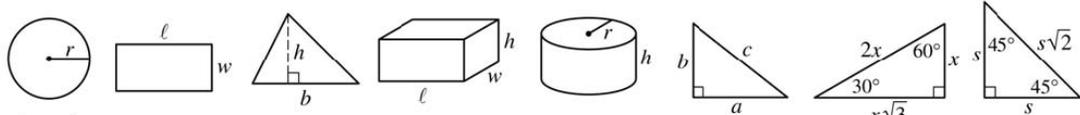
2. All numbers used are real numbers.

3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not drawn to scale. All figures lie in a plane unless otherwise indicated.

4. Unless otherwise specified, the domain of any function  $f$  is assumed to be the set of all real numbers  $x$  for which  $f(x)$  is a real number.

---

Reference Information



$A = \pi r^2$      $A = \ell w$      $A = \frac{1}{2}bh$      $V = \ell wh$      $V = \pi r^2 h$      $c^2 = a^2 + b^2$     Special Right Triangles  
 $C = 2\pi r$

The number of degrees of arc in a circle is 360.  
 The sum of the measures in degrees of the angles of a triangle is 180.

1. If  $f(x) = \frac{x}{3} + 3$ ,  $g(x) = |x^2 - 4|$  and  $f(g(d)) = 3$ , which of the following is a possible value for  $d$ ?

- A. -2
- B. 3
- C. 0
- D. 4
- E. -6

2. If  $\frac{10}{x} = -20$ , what is the value of  $-4x + 3$ ?

- A. -5
- B. 11
- C. 5
- D. 1
- E. 2

3. If  $x + 3 > 0$  and  $3 - 2x > -3$ , then  $x$  could be each of the following EXCEPT

- A. 3
- B. 2
- C. 1
- D. 0
- E. -1

4. If  $a$  is an integer, which of the following could be  $a^4$ ?

- A.  $1.6 \times 10^{11}$
- B.  $1.6 \times 10^{12}$
- C.  $1.6 \times 10^{13}$
- D.  $1.6 \times 10^{14}$
- E.  $1.6 \times 10^{15}$

5. If  $b = 27^{\frac{4}{3}}$ , what is the value of  $x$ ?

- A. 36
- B.  $\frac{4}{81}$
- C. 81
- D.  $\frac{4}{3}$
- E.  $\frac{108}{3}$

## SECTION 7: MATH

6. If  $2\sqrt{x} = y^2$  and  $y = 4$ , what is the value of  $x$ ?

- A. 8
- B. -8
- C. 64
- D. 16
- E. 4

7. If  $2^{2x-4} = 8^4$ , what is the value of  $4x - 2$ ?

- A. 8
- B. 16
- C. 32
- D. 30
- E. 2

8. A study regarding students' favorite ice cream flavors is conducted at a particular middle school. Of 320 students interviewed, the following data was collected:

	Vanilla	Chocolate	Strawberry	Total
Boys	40	75	35	150
Girls	80	60	30	170
Total	120	135	65	320

If you selected a random student who participated in the survey, what is the probability that you select someone who did not choose Chocolate as his or her favorite?

- A. 42%
- B. 14%
- C. 54%
- D. 58%
- E. 60%

# SECTION 7: MATH

**Directions:** For Student-Produced Response questions 9-18, use the grids at the bottom of the answer sheet page on which you have answered questions 1-8.

Each of the remaining 10 questions requires you to solve the problem and enter your answer by marking the circles in the special grid, as shown in the examples below. You may use any available space for scratchwork.

Answer:  $\frac{7}{12}$

Write answer in boxes. →

7	/	1	2
•	•	•	•
0	0	0	0
1	1	•	1
2	2	2	•
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
•	7	7	7
8	8	8	8
9	9	9	9

← Fraction line

Grid in result. →

Answer: 2.5

2	.	5
•	•	•
0	0	0
1	1	1
2	•	2
3	3	3
4	4	4
5	5	•
6	6	6
7	7	7
8	8	8
9	9	9

← Decimal point

Answer: 201

Either position is correct.

2	0	1
•	•	•
0	•	0
1	1	•
2	•	2
3	3	3
4	4	4

2	0	1
•	•	•
0	0	0
1	1	•
2	•	2
3	3	3
4	4	4

**Note:** You may start your answers in any column, space permitting. Columns not needed should be left blank.

- Mark no more than one circle in any column.
- Because the answer sheet will be machine-scored, **you will receive credit only if the circles are filled in correctly.**
- Although not required, it is suggested that you write your answer in the boxes at the top of the columns to help you fill in the circles accurately.
- Some problems may have more than one correct answer. In such cases, grid only one answer.
- No question has a negative answer.
- **Mixed numbers** such as  $3\frac{1}{2}$  must be gridded as 3.5 or 7/2. (If 

3	/	1	2
•	•	•	•
0	0	0	0
1	1	1	1
2	•	2	2
3	3	3	•
4	4	4	4
5	5	5	5
6	6	6	6

 is gridded, it will be interpreted as  $\frac{31}{2}$ , not  $3\frac{1}{2}$ .)

- **Decimal Answers:** If you obtain a decimal answer with more digits than the grid can accommodate, it may be either rounded or truncated, but it must fill the entire grid. For example, if you obtain an answer such as 0.6666..., you should record your result as .666 or .667. **A less accurate value such as .66 or .67 will be scored as incorrect.**

Acceptable ways to grid  $\frac{2}{3}$  are:

2	/	3
•	•	•
0	0	0
1	1	1
2	•	2
3	3	•
4	4	4
5	5	5
6	6	6

.	6	6	6
•	•	•	•
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	•	•	•

.	6	6	7
•	•	•	•
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	•	•	•

## SECTION 7: MATH

9. Music is created when tones (known as notes) are produced separately or together. The frequency of these tones is measured in cycles per second. Musical instruments are normally tuned with equal temperament, with the note “A” above middle “C” on a piano having a frequency of 440 cycles per second. To create a major or a minor chord, three notes need to be played at the same time. The ratio of note frequencies for a major chord is 4:5:6, while the ratio for a minor chord is 10:12:15. What is the frequency ratio (in cycles per second) of the middle note of a major chord to the middle note of a minor chord?

---

Chart for Question 10:

$f(x)$	$x$
1	4
10	$a$
$a$	$b$

10. Using the chart above, if  $f(x) = \frac{3}{4}x - 2$ , what is  $b$ ?

---

11. If  $X$  is the set of integers between  $-20$  and  $20$ , and a number is in set  $Y$  if it is the square of a number in  $X$ , how many elements of set  $Y$  are in set  $X$ ?

## SECTION 7: MATH

12. If  $x^y = 9$ , and  $3y = 2$ , what is the value of  $x$  ?

---

13. If  $y$  is a prime number such that  $4y > 13 > 7/8y$ , what is one possible value of  $y$ ?

---

14. What is the slope of a line perpendicular to the line through the points  $(2, 6)$  and  $(-1, 4)$ ?

---

15. What is the slope of a line parallel to the line  $4x - 3y = 16$ ?

---

16. Find the distance between the  $y$ -intercept of the line  $y = 2x + 3$  and the  $x$ -intercept of the line  $3x - 4y = 12$ .

---

17. For the following test scores, let the mean =  $a_1$ , median =  $a_2$ , and mode =  $a_3$ .

80	95	90	70	78
78	95	78		

Find  $a_1 + a_2 + a_3$ .

---

18. The average age of a 12-person club is 30. When one new member joins, the average age rises to 31. What is the age of the new member?

.

## SECTION 8: CRITICAL READING

Time Limit: 20 minutes, Question Count: 19

**Directions:** Each sentence below has one or two blanks, each blank indicating that something has been omitted. Beneath the sentence are five words or sets of words labeled A through E. Choose the word or set of words that, when inserted in the sentence, best fits the meaning of the sentence as a whole.

1. Although the government claims to be a united entity that works cohesively, it has become apparent that the divided government is -----  
--- fails to implement interdepartmental collaboration.

- A. ineffective
- B. discrete
- C. connected
- D. autonomous
- E. strategic

2. Based on the United States' federal budget, domestic security is an ----- priority because it accounts for such a significant percentage of federal spending.

- A. unequivocal
- B. important
- C. egregious
- D. impermissible
- E. insignificant

3. By cleverly balancing her varied commitments and always being on the ball, Amanda has proved that she is an ----- student who will excel at the university level.

- A. overcommitted
- B. eager
- C. academic
- D. astute
- E. ostensible

## SECTION 8: CRITICAL READING

4. It was terrifying to watch the policeman ----- recall the fatal car accident with the least bit of concern; at this point, I realized that the victims would find minimal sympathy or ----- by turning to the authorities for help.

- A. casually...indifference
- B. traumatically...assistance
- C. anxiously...empathy
- D. blithely...recourse
- E. vividly...ease

5. Since the virus was ----- and would paralyze the entire Eastern bloc if it was allowed to spread, every individual that was suspected of being infected was ----- in a sealed laboratory in a corner of the country until the rest of the region was secured.

- A. contagious...isolated
- B. dangerous...sequestered
- C. harmless...placed
- D. curable...murdered
- E. hypothetical...tested

6. When the princess arrived in New York City, her entourage members were disappointed to observe her comments about litter, noting how --- ----- the city streets were, rather than ----- the city's cultural value and inherent vibrancy.

- A. well-paved...valuing
- B. ignorant...belittling
- C. animated...demeaning
- D. squalid...appreciating
- E. wasteful...ignoring

## SECTION 8: CRITICAL READING

**Directions:** The passages below are followed by questions based on their content; questions following a pair of related passages may also be based on the relationship between the paired passages. Answer the questions on the basis of what is stated or implied in the passages and in any introductory material that may be provided.

**Questions 7-19 are based on the following passages.**

**Below are two passages about human biology and evolution. The first is an excerpt from a publication on the concept of “inherited traits” by Jean-Baptiste Lamarck and the second is an excerpt from Charles Darwin’s *On the Origin of Man*.**

### Passage 1

“An observation which has for a long time struck me is that, having remarked that the habitual use and exercise of an organ proportionally develops its size and functions, as the lack of employment weakens in the same proportion its power, and even more or less completely atrophies it, I am apprised that of all the organs of man’s body which is the most strongly submitted to this influence, that is to say, in which the effects of exercise and of habitual use are the most considerable, is it not the organ of thought—in a word, is it not the brain of man?”

“Compare the extraordinary difference existing in the degree of intelligence of a man who rarely exercises his powers of thought, who has always been accustomed to see but a small number of things, only those related to his ordinary wants and to his limited desires; who at no time thinks about these same objects, because he is obliged to occupy himself incessantly with providing for these same wants; finally, who has few ideas, because his attention, continually fixed on the same things, makes him notice nothing, that he makes no comparisons, that he is in the very heart of nature without knowing it, that he looks upon it almost in the same way as do the beasts, and that all that surrounds him is nothing to him: compare, I say, the intelligence of this individual with that of the man who, prepared at the outset by education, has contracted the useful practice of exercising the organ of his thought in devoting himself to the study of the principal branches of knowledge; who observes and compares everything he sees and which affects him; who forgets himself in examining everything he can see, who insensibly accustoms himself to judge of everything for himself, instead of giving a blind assent to the authority of others; finally, who, stimulated by reverses and especially by injustice, quietly rises by reflection to the causes which have produced all that we observe both in nature and in human society; then you will appreciate how enormous is the difference between the intelligence of the two men in question.

## SECTION 8: CRITICAL READING

### Passage 2

We shall best understand the probable course of natural selection by taking the case of a country undergoing some physical change, for instance, of climate. The proportional numbers of its inhabitants would almost immediately undergo a change, and some species might become extinct. We may conclude, from what we have seen of the intimate and complex manner in which the inhabitants of each country are bound together, that any change in the numerical proportions of some of the inhabitants, independently of the change of climate itself, would most seriously affect many of the others. If the country were open on its borders, new forms would certainly immigrate, and this also would seriously disturb the relations of some of the former inhabitants. Let it be remembered how powerful the influence of a single introduced tree or mammal has been shown to be. But in the case of an island, or of a country partly surrounded by barriers, into which new and better adapted forms could not freely enter, we should then have places in the economy of nature which would assuredly be better filled up, if some of the original inhabitants were in some manner modified; for, had the area been open to immigration, these same places would have been seized on by intruders. In such case, every slight modification, which in the course of ages chanced to arise, and which in any way favored the individuals of any of the species, by better adapting them to their altered conditions, would tend to be preserved; and natural selection would thus have free scope for the work of improvement. We have reason to believe that a change in the conditions of life, by specially acting on the reproductive system, causes or increases variability; and in the foregoing case the conditions of life are supposed to have undergone a change, and this would manifestly be favorable to natural selection, by giving a better chance of profitable variations occurring; and unless profitable variations do occur, natural selection can do nothing. Not that, as I believe, any extreme amount of variability is necessary; as man can certainly produce great results by adding up in any given direction mere individual differences, so could Nature, but far more easily, from having incomparably longer time at her disposal. Nor do I believe that any great physical change, as of climate, or any unusual degree of isolation to check immigration, is actually necessary to produce new and unoccupied places for natural selection to fill up by modifying and improving some of the varying inhabitants.

## SECTION 8: CRITICAL READING

7. The author of Passage 1 would most likely agree that the process that is exercised most extensively is

- A. rigorous weightlifting
- B. altered-pitch hearing
- C. close-proximity seeing
- D. spatial planning
- E. deep breathing

8. According to Passage 1, which of the following objects would distinguish one individual's intelligence from another individual's intelligence?

- A. jogging
- B. debate
- C. healthy eating
- D. genetics
- E. desire

9. In the sentence beginning "An observation which has for a long time...and even more or less completely atrophies it ..." in Passage 1 the term "atrophies" most nearly means

- A. earns
- B. deteriorates
- C. significantly gains
- D. changes
- E. ameliorates

## SECTION 8: CRITICAL READING

10. Which of the following terms most closely resembles a part of people's lives that the author most disagrees with following?

- A. focusing in without regard to surroundings
- B. challenging superiors
- C. standard routine
- D. studying the branches of knowledge
- E. education

11. Based on the provided text, the author of Passage 1 would believe that the LEAST intelligent individual is

- A. the student who remains engrossed in his dissection despite calls for dinner from his mother
- B. the sophisticated young man who respectfully agreed not to publish a controversial paper exposing safety concerns in his school
- C. the young woman who breaks her routine to attempt a new path in life
- D. the grandmother, who in an attempt to avoid dementia, keeps her mind active by knitting and playing cards
- E. the scientist who meticulously compares all the data before him prior to drawing a conclusion

12. In the context of a comparison with respect to a country, Passage 2 analyzes

- A. the results of reproduction measures versus those of climate change
- B. the effects of an external stimulus and an internal stimulus
- C. how natural selection has affected inherited traits
- D. economic and social conditions that affect the core citizenry
- E. trees and mammals in any given region

## SECTION 8: CRITICAL READING

13. The passages differ in primary subject matter because Passage 2

- A. discusses national matters while Passage 1 focuses on individual matters
- B. focuses on border management while Passage 1 discusses intelligence determinants
- C. argues in favor of the spectrum of myriad human traits while Passage 1 informs readers on how certain humans are more intelligent
- D. concentrates on the reproductive system and Passage 1 covers all organs
- E. discusses which species will survive while Passage 1 offers an explanation for the distinction between humans

14. The authors both adopt an attitude and tone that could be described as

- A. didactic
- B. intuitive
- C. anachronistic
- D. pretentious
- E. mundane

15. Which of the following choices describes the author's intent in using the sentence "Let it be remembered how powerful the influence of a single introduced tree or mammal has been shown to be."?

- A. To prove to their reader that plants and animals can affect humans more than we think
- B. To convey how singular objects in nature can set off a number of other events
- C. To commemorate the lost entities of the forest amidst problems from natural selection
- D. To demonstrate how foreigners could disrupt the balance of life
- E. To show how the reproductive system is connected to plant and animal life

## SECTION 8: CRITICAL READING

16. In which of the following ways do the two passages differ the most?

- A. Passage 1 was written by an arrogant man who believed himself to be the most intelligent, whereas the author of Passage 2 refers to himself as a mere tree.
- B. Passage 1 focuses on the individual's control of himself, whereas Passage 2 directly attacks Passage 1's ideas.
- C. Passage 1 discusses how an individual himself can control which organs become stronger based on his allocated use, where as Passage 2 presents a case for how the community shapes the individual and certain environmental changes can affect an individual.
- D. Passage 2 confutes the idea that the human is controlled by the environment, where as Passage 1 discusses how the individual's use of certain organs allows him to shape his own fate.
- E. Passage 1 teaches the reader how to develop certain organs for intentional strength, while Passage 2 presents a case for developing strength though intentional reproduction.

17. Which aspect of society seems particularly important in Passage 2 but not in Passage 1?

- A. self-determinism
- B. individual survival qualities
- C. interdependence
- D. varying conditions and individual desires
- E. human progress

## SECTION 8: CRITICAL READING

18. The author of Passage 2 would support which of the following statements?

- A. Members of natural environments are loosely connected and often roam independently.
- B. It would be preferable to see improvements in the original members of society than bring in outsiders from beyond the borders.
- C. Variability is an insignificant concept to natural selection; reproduction is of utmost importance.
- D. Great physical change is critical to natural selection.
- E. Natural selection favors the weak members of society.

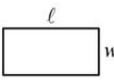
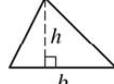
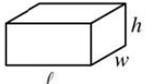
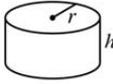
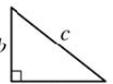
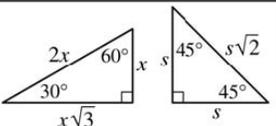
19. The authors of both passages are most likely to agree that their hypotheses are further by the

- A. analysis of the violent and sudden external extinction of dinosaurs
- B. discovery of fossils that allow humans to date existence back by millions of year
- C. biological recovery of sperm cells and other reproductive fragments from hundreds of years ago
- D. gradual disappearance of the appendicle vestiges in humans
- E. the increase in muscle strength through playing sports

# SECTION 9: MATH

**Time Limit: 20 minutes, Question Count: 16**

**Directions:** For this section solve each problem and select the **best** answer choice. Fill in the corresponding circle on the answer sheet. You may use any available space for scratchwork.

Notes	<ol style="list-style-type: none"> <li>1. The use of a calculator is permitted.</li> <li>2. All numbers used are real numbers.</li> <li>3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not drawn to scale. All figures lie in a plane unless otherwise indicated.</li> <li>4. Unless otherwise specified, the domain of any function <math>f</math> is assumed to be the set of all real numbers <math>x</math> for which <math>f(x)</math> is a real number.</li> </ol>
Reference Information	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p><math>A = \pi r^2</math> <math>C = 2\pi r</math></p> </div> <div style="text-align: center;">  <p><math>A = \ell w</math></p> </div> <div style="text-align: center;">  <p><math>A = \frac{1}{2}bh</math></p> </div> <div style="text-align: center;">  <p><math>V = \ell wh</math></p> </div> <div style="text-align: center;">  <p><math>V = \pi r^2 h</math></p> </div> <div style="text-align: center;">  <p><math>c^2 = a^2 + b^2</math></p> </div> <div style="text-align: center;">  <p>Special Right Triangles</p> </div> </div> <p>The number of degrees of arc in a circle is 360. The sum of the measures in degrees of the angles of a triangle is 180.</p>

1. If  $f(1) = 0$  and  $f(5) = 24$ , which of the following could be  $f(x)$  ?

- A.  $x^2 - 1$
- B.  $x - 1$
- C.  $-x + 1$
- D.  $5x - 1$
- E.  $4x + 4$

2. In the figure above, which of the following points lies within the circle?

- A. (0, 3)
- B. (3, 1)
- C. (-3, 0)
- D. (-1, 1)
- E. (-1, -3)

## SECTION 9: MATH

3. Two pounds of sugar are required to make a tray of apple turnovers. How many pounds of sugar are needed to make enough turnovers to fill 9 boxes, if each box can hold  $1\frac{1}{3}$  trays?

- A. 12
  - B. 24
  - C. 18
  - D.  $\frac{8}{3}$
  - E.  $20\frac{2}{3}$
- 

4. What is the midpoint of the line segment connecting the points  $(-2, 6)$  and  $(3, -8)$ ?

- A.  $(1, -2)$
  - B.  $(-0.5, -1)$
  - C.  $(0.5, 1)$
  - D.  $(5, -14)$
  - E.  $(0.5, -1)$
- 

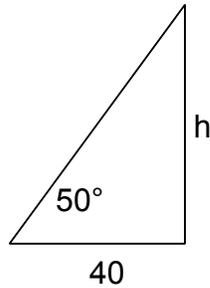
5.  $\frac{2x^2 - 9x + 10}{x^2 + 5x - 14} =$

A. The expression cannot be simplified.

- B.  $\frac{x-5}{x+7}$
  - C.  $\frac{2x+5}{x-7}$
  - D.  $\frac{2x-2}{x+7}$
  - E.  $\frac{2x-5}{x+7}$
-

## SECTION 9: MATH

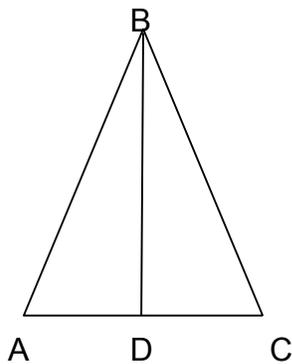
6. If you are standing 40 feet from the side of a building and the angle to the top of the building is  $50^\circ$ , find the height,  $h$ , of the building to the nearest hundredth.



- A. 47.67
- B. 30.64
- C. 25.71
- D. 62.23
- E. 52.22

---

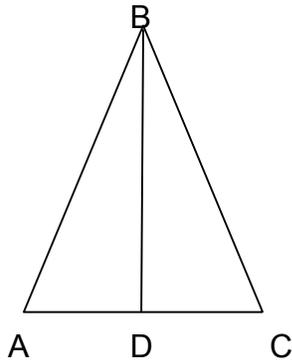
7. Find the height,  $BD$ , of Isosceles triangle  $ABC$  if  $m\angle C = 4$  and  $m\angle ABD = 25^\circ$ . Round to the nearest hundredth.



- A. .85
- B. 1.81
- C. 4.29
- D. 4.73
- E. 2.21

## SECTION 9: MATH

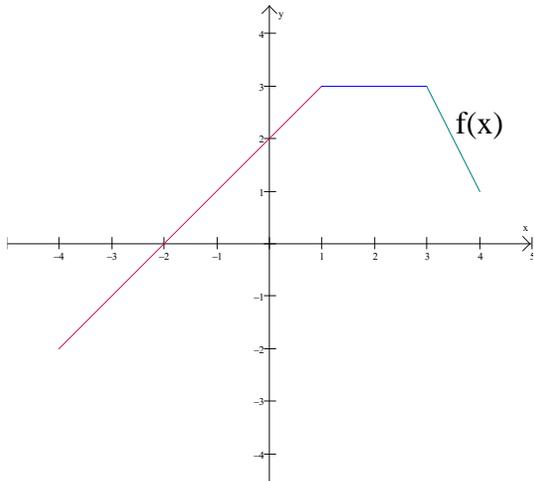
8. Find  $m\angle AC$  if isosceles triangle  $ABC$  has  $m\angle ABD = 18^\circ$  and  $m\angle BDC = 14^\circ$ . Round to the nearest tenth.



- A. 9.1
- B. 8.7
- C. 26.6
- D. 29.4
- E. 4.5

---

9. Between what values of  $x$  is  $f(x)$  constant?

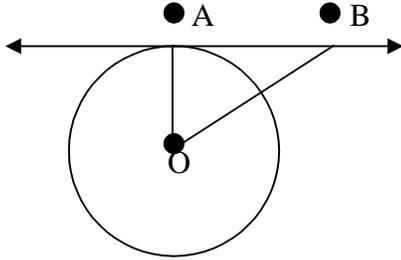


- A. -4 to 1
- B. 1 to 3
- C. 3 to 5
- D. 1 to 5
- E. -4 to 5

## SECTION 9: MATH

---

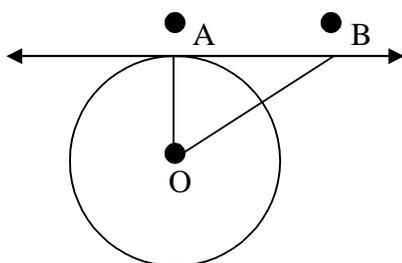
10.  $\overleftrightarrow{AB}$  is tangent to circle O. If  $m\angle AOB = 62^\circ$ , what is the measure of  $\angle ABO$ ?



- A.  $62^\circ$
  - B.  $28^\circ$
  - C.  $118^\circ$
  - D.  $90^\circ$
  - E.  $18^\circ$
-

## SECTION 9: MATH

11.  $\overleftrightarrow{AB}$  is tangent to circle O. If  $m\angle AOB = 12$  and the radius of the circle is 5, find  $m\angle OBA$ .



- A. 13  
B. 10  
C. 8  
D. 17  
E. 15
- 
12. What is the mode of the following test scores?

75    82    94    92    88    92    70

- A. 70  
B. 85  
C. 82  
D. 88  
E. 92

## SECTION 9: MATH

13. Students at a particular high school can choose to take either Spanish or French. The choices made by 1000 students at that school were organized into the following chart:

	Spanish	French	Total
Male	260	240	500
Female	200	300	500
Total	460	540	1000

What is the probability that a randomly selected student chose French given that the student chosen was a male?

- A. 60%
  - B. 48%
  - C. 42%
  - D. 40%
  - E. 24%
-

## SECTION 9: MATH

14. Students at a particular high school can choose to take either Spanish or French. The choices made by 1000 students at that school were organized into the following chart:

	Spanish	French	Total
Male	260	240	500
Female	200	300	500
Total	460	540	1000

If there are really 2500 students at the school and assuming all probabilities remain the same, how many students can be expected to enroll in French?

- A. 1350
  - B. 1250
  - C. 1150
  - D. 1050
  - E. 540
-

## SECTION 9: MATH

15. A study regarding students' favorite ice cream flavors is conducted at a particular middle school. Of 320 students interviewed, the following data was collected:

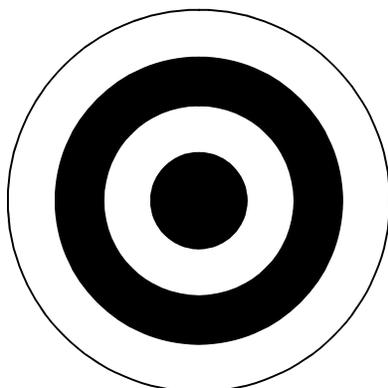
	Vanilla	Chocolate	Strawberry	Total
Boys	40	75	35	150
Girls	80	60	30	170
Total	120	135	65	320

How many people interviewed were boys or preferred vanilla?

- A. 270
  - B. 230
  - C. 150
  - D. 120
  - E. 40
-

## SECTION 9: MATH

16. A dartboard is made from four concentric circles. The radii of the circles, from largest to smallest are 4, 3, 2, and 1 ft. What is the probability that a dart thrown at the board will hit a shaded region?



- A.  $\frac{3}{8}$     B.  $\frac{1}{2}$     C.  $\frac{5}{8}$     D.  $\frac{3}{4}$     E.  $\frac{7}{8}$

## SECTION 10: WRITING

**Time Limit: 10 minutes, Question Count: 14**

**Directions:** The following sentences test correctness and effectiveness of expression. Part of each sentence or the entire sentence is underlined; beneath each sentence are five ways of phrasing the underlined material. Choice A repeats the original phrasing; the other four choices are different. If you think the original phrasing produces a better sentence than any of the alternatives, select choice A; if not, select one of the other choices. In making your selection, follow the requirements of standard written English; that is, pay attention to grammar, choice of words, sentence construction, and punctuation. Your selection should result in the most effective sentence—clear and precise, without awkwardness or ambiguity.

1. The United States of America has grown out of a fledgling democratic experiment to one of the most powerful and exemplary nations in the world today.

- A. has grown out of a fledgling democratic experiment
- B. have grown out of a fledgling democratic experiment
- C. have grown from a fledgling democratic experiment
- D. has grown from a fledgling democratic experiment
- E. has been continuously growing into a fledgling democratic experiment

2. After considering the future of the economy and reviewing several companies' reports, Carlos decided to invest with the stock market.

- A. companies' reports, Carlos decided to invest with the stock market.
- B. company's reports, Carlos decided to invest in the stock market.
- C. companies' report, Carlos decided to invest with the stock market.
- D. companies' reports, Carlos was invested with the stock market.
- E. companies' reports, Carlos decided to invest in the stock market.

3. As a teenager making his own money and paying for his own car, Dylan wanted to gain independence of his parents.

- A. wanted to gain independence of his parents.
- B. wanted to gain independence from his parents.
- C. wanted to be independent of his parents.
- D. wanted to gain independence by his parents.
- E. wanted to gain independence out of his parents.

4. Endemic plants, such as the natural shrubland vegetation that has always been a part of the Western Cape of South Africa, are native of a certain region.

- A. are native of a certain region.
- B. is native of a certain region.
- C. are native to a certain region.
- D. are native in a certain region.
- E. is native to a certain region.

## SECTION 10: WRITING

5. Neither football or basketball attract as many viewers as stock car auto racing.

- A. Neither football or basketball attract
- B. Neither football nor basketball attract
- C. Neither football or basketball attracts
- D. Neither football nor basketball attracts
- E. Either football or basketball attract

6. By registering with INAP, the intelligent student gained access to countless features designed to improve her SAT score.

- A. access to countless features designed to improve her SAT score.
- B. access of countless features designed to improve their SAT score.
- C. access of countless features designed to improve her SAT score.
- D. access to countless features designed to improve their SAT score.
- E. access for countless features designed to improve her SAT score.

7. Some people believe that a progressive tax system is superior than a flat tax system because it encourages economic equity by taxing high earners more money.

- A. system is superior than a
- B. system is superior of a
- C. system are superior to a
- D. system are superior than a
- E. system is superior to a

8. When the mother heard her young child crying, she immediately upstairs to attend to her needs.

- A. attend to her needs.
- B. attend at her needs.
- C. attend her needs.
- D. attend the child's needs.
- E. attend to the child's needs.

9. The Inside Passage between the Alaska Panhandle and British Columbia offers native and commercial sailors the opportunity to avoid the rough weather conditions of the broad ocean area, the passage also provides tourists with an opportunity to see the isolated communities of the region.

- A. ocean area, the passage also provides tourists
- B. ocean area; the passage also provides tourists
- C. ocean area; the passage also provides for tourists
- D. ocean area; therefore, the passage also provides tourists
- E. ocean area, but the passage also provides for tourists

10. When Ashley visited Australia during the summer, she was visiting relatives, went sight-seeing and went scuba-diving.

- A. summer, she was visiting relatives, went sight-seeing,
- B. Summer, she was visiting relatives, went sight-seeing,
- C. summer, she was visiting relatives, going sight-seeing
- D. Summer, she visited relatives, went sight-seeing,
- E. summer, she visited relatives, went sight-seeing

## SECTION 10: WRITING

11. After Emma found out that her family would be moving during the fall, she became depressed, confused and felt angry.

- A. confused and felt angry.
- B. confused and angry.
- C. was confused and angry.
- D. confusing and angrily.
- E. confuse and anger.

12. High school teachers often tell students, “If one takes thorough notes and pays attention when I lecture, then you will be successful in my class.”

- A. you will be successful in my class.
- B. you will be successful in our classes.
- C. one will be succeeding in our classes.
- D. one will be successful in my class.
- E. one was successful in my class.

13. The mother goose, leading all of her babies, were swimming across the pond.

- A. were swimming across the pond.
- B. swam across the pond.
- C. to swim across the pond.
- D. was swimming across the pond.
- E. have swam across the pond.

## SECTION 10: WRITING

14. A minority of the American population vote during election years either because of current legal restrictions or personal indifference.

- A. vote during election years
- B. votes during election years
- C. votes on election years
- D. vote on election year
- E. voted during election years