Reading Test

65 MINUTES, 52 QUESTIONS

Turn to Section 1 of your answer sheet to answer the questions in this section.

DIRECTIONS

Each passage or pair of passages below is followed by a number of questions. After reading each passage or pair, choose the best answer to each question based on what is stated or implied in the passage or passages and in any accompanying graphics (such as a table or graph).

Questions 1-10 are based on the following passage.

This passage is adapted from Anita Desai, "The Artist's Life." ©2000 by Anita Desai.

Of course Polly had been introduced to Art as an infant. Of course the local school provided her—indiscriminately, as it did all children—with paint and clay and crayons, and she had made, as all children make, representations of her home and family—triangular-shaped father and mother holding hands, box-shaped brother in outsized shorts standing apart—as well as of daisies in a vase, and even a lopsided teacup or two, each of them intensely satisfying for a day or two, then desperately unsatisfying thereafter.

But what Miss Abigail at the camp introduced her to was Real Art: in her whispery, bubbly, disquieting voice she had urged them to 'paint your dreams—show me what you dreamed last night'. She had spaced the words, leaving great gaps for them to fill, and then sighed a replete sigh, as one might when overcome by swirls of incense, when Polly presented a particularly lurid or mysterious painting—headless, shrouded figures in shades of purple appearing on the surface of a lake with large, many-pointed stars shining down on them out of a streaky sky, or purple pigeons swooping down out of a pink sky to light upon lilac roofs (Polly was very attached to the colour purple, and perhaps it was only a coincidence but that was the colour that dominated Miss Abigail's tie-dyed shifts too). For the sake of that narrowing of green cat's eyes, that slow exhalation of breath that spoke such volumes, and simply for the sake of staying close to that enchantingly incense-scented young woman with her flowing red hair and flowing purple dresses, Polly dedicated the summer to paint, letting others canoe, shoot arrows, roast marshmallows or run around working up a sweat.

She came home reluctantly, dazed into an uncharacteristic silence, with her paintings rolled up into an impressively long roll—Miss Abigail had insisted she always use large sheets of thick paper for her art. The family had been faintly surprised by what she spread out on the dining table for them; they turned to her with quizzical looks and remarks like 'Very nice, dear,' and 'Now what is *that* supposed to be?' making her roll them up again in offended exasperation, and carry them up to the attic where she spread them out along with all her painting equipment. She was determined to find herself a tie-dyed skirt, wear her hair loose, not in tight painful pigtails any more, and spend the rest of the summer drawing long strokes of purple and lilac paint across sheets of paper, humming the melancholy tunes Miss Abigail had hummed at the camp.

Unfortunately it was very, very hot under the attic roof, and in that thrumming heat of late August she would find her head spinning after a while. So much so that she was compelled to stretch out on a sheet of canvas and fall into a kind of stupor, struggling to keep her eyes open. Spiders descended from the rafters and spun their wavering webs, or dangled like aerial acrobats over her head. Seeing one unroll its lifeline and drop, cautiously and investigatively,

closer and closer to the nest of her hair, she swatted at it, and upset a mug of water over a painting of a volcano spewing blood-red and orange paint. The water and paint seeped through several layers of paper, staining not only one but several other paintings as well.

That was when she descended the stairs, arms crossed over her chest, chin sunk, looking down at her bare feet, oppressed by the burden of being an artist. 'What's the matter, Polly?' her mother asked, 'got a headache?' and her brother jumped out from behind a door, with a 'Yar-boo!' that made her drop her arms, jerk up her head, then stick out her tongue.

It was then that the maple's drooping August skirts and the rotting rubber tyre hanging from its branch became the only option for her during the remaining days of summer. It was then that she discovered she could sail through the green leaves and the yellow air and be the artist without having to go through the sticky manoeuvres required by actual painting. Truth be told, she had no distinct memory of any of Miss Abigail's paintings, only of her loose hair, the long skirts, the whispering voice. She became convinced that art was not so much a matter of painting as of *being* an artist.

1

In context, the first paragraph (lines 1-11) mainly serves to

A) establish that Polly's talent for art was evident at an early age.

B) criticize shortcomings the narrator perceives in Polly's art education at school.

C) set up a contrast between Polly's earliest experiences with art and her later ones.

D) emphasize the reliability of the narrator's account of Polly's art education.

2

Based on the passage, "Real Art" (line 13) is best characterized as art that

A) portrays a variety of everyday subjects in an accurate and accessible way.

B) presents detailed depictions of natural landscapes rather than of people.

C) inspires curiosity about the artist's true intentions through its minimal quality.

D) conveys the unique imagination of the artist through unusual imagery.

3

The passage indicates that Polly is most fascinated by Miss Abigail's

A) air of mystery and drama.

B) expertise in discussing art.

C) talent as a storyteller.

D) skill in painting landscapes.

4

The parenthetical information in lines 24-27 mainly serves to

A) convey that Polly's color choices have influenced Miss Abigail.

B) hint at a possible explanation for an artistic choice Polly makes.

C) emphasize the unexpected nature of a similarity between Polly and Miss Abigail.

D) suggest Polly's reluctance to experiment with different colors and techniques.

1

5

According to the passage, when Polly returns home from camp, she resolves to

A) use a greater variety of techniques in her artworks.

B) pay greater heed to the guidance of experienced adults.

C) transform her appearance and daily activities.

D) impart lessons about painting to members of her family.

6

Which choice provides the best evidence that Polly changes her attitude toward her surroundings?

A) Lines 55-58 ("So much . . . open")

B) Lines 65-67 ("The water . . . well")

C) Lines 78-82 ("It was . . . painting")

D) Lines 84-86 ("She . . . artist")

7

As used in line 63, "upset" most nearly means

A) attacked.

B) spoiled.

C) overturned.

D) distressed.

8

The narrator's view of Polly's artistic aspirations is best described as one of

A) gentle mocking, because the narrator conveys Polly's childlike exaggeration of the obstacles she faces.

B) strong criticism, because the narrator demonstrates that Polly's behavior is inconsistent with her professed ideals.

C) growing admiration, because the narrator indicates that Polly overcomes the skepticism of those around her.

D) lingering fascination, because the narrator appreciates the novelty of Polly's approach to creating art.

9

Which choice provides the best evidence for the answer to the previous question?

A) Lines 46-52 ("She . . . camp")

B) Lines 68-71 ("That . . . artist")

C) Lines 71-74 ("What's . . . tongue")

D) Lines 82-84 ("Truth . . . voice")

10

As used in line 82, "distinct" most nearly means

A) different.

B) unequal.

C) unusual.

D) clear.

Questions 11-20 are based on the following passage and supplementary material.

This passage is adapted from Colleen Haight, "The Problem with Fair Trade Coffee." ©2011 by Leland Stanford Jr. University. The Fair Trade movement seeks to help producers in developing countries get a fair price for their products, such as coffee, while promoting environmentally sustainable practices and the ethical treatment of workers.

Why do we care about fairly traded coffee? One reason is the importance of coffee to the economies of the countries in which the crop is grown. Coffee is the second most valuable commodity exported from developing countries, petroleum being the first. For many of the world's least developed countries, such as Honduras, Ethiopia, and Guatemala, coffee exports make up an enormous share of the export earnings, comprising in some cases more than 50 percent of foreign exchange earnings. In addition, many of the coffee growers are small and their businesses are financially marginal.

The primary way in which FLO (Fairtrade Labelling Organizations) and Fair Trade USA attempt to alleviate poverty and jump-start economic development among coffee growers is a mechanism called a price floor, a limit on how low a price can be charged for a product. As of March 2011, FLO had fixed a price floor of $1.40 per pound of green coffee beans. FLO also indexes [ties] that floor to the New York Coffee Exchange price, so that when prices rise above $1.40 per pound for commodity, or non-specialty, coffee, the Fair Trade price paid is always at least 20 cents per pound higher than the price for commodity coffee.

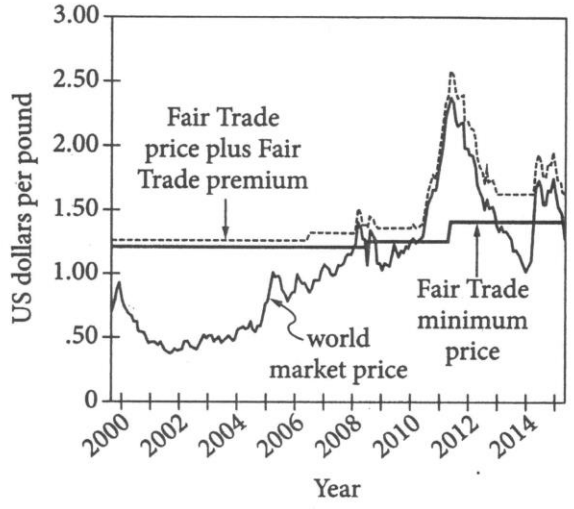
Commodity coffee is broken into grades, but within each grade the coffee is standardized. This means that beans from one batch are assumed to be identical to those in any other batch. It is a standardized product. Specialty coffee, on the other hand, is sold because of its distinctive flavor characteristics. Because specialty coffees are of a higher grade, they command higher prices. Fair Trade coffee can come in any quality grade, but the coffee is considered part of the specialty coffee market because of its special production requirements and pricing structure. It is these requirements and pricing structure that create a quality problem for Fair Trade coffee.

To understand how the problem arises, one must understand that the low consumer demand for Fair Trade coffee means that not all of a particular farmer's coffee, which will be of varying quality, may be sold at the Fair Trade price. The rest must be sold on the market at whatever price the quality of the coffee will support.

A simple example illustrates this point. A farmer has two bags of coffee to sell and there is a Fair Trade buyer for only one bag. The farmer knows bag A would be worth $1.70 per pound on the open market because the quality is high and bag B would be worth only $1.20 because the quality is lower. Which should he sell as Fair Trade coffee for the guaranteed price of $1.40? If he sells bag A as Fair Trade, he earns $1.40 (the Fair Trade price) and sells bag B for $1.20 (the market price), equaling $2.60. If he sells bag B as Fair Trade coffee he earns $1.40, and sells bag A at the market price for $1.70, he earns a total of $3.10. To maximize his income, therefore, he will choose to sell his lower quality coffee as Fair Trade coffee. Also, if the farmer knows that his lower quality beans can be sold at $1.40 per pound (provided there is demand), he may decide to increase his income by reallocating his resources to boost the quality of some beans over others. For example, he might stop fertilizing one group of plants and concentrate on improving the quality of the others. Thus the chances increase that the Fair Trade coffee will be of consistently lower quality.

Figure 1

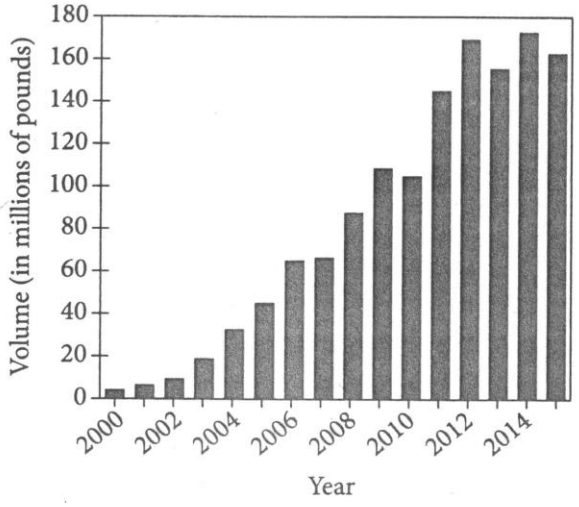
Fair Trade and World Market Coffee Prices for Coffee, 2000–2015



Adapted from V. Nelson et al., *Fairtrade Coffee: A Study to Assess the Impact of Fairtrade for Coffee Smallholders and Producer Organisations in Indonesia, Mexico, Peru, and Tanzania.* ©2016 by Natural Resources Institute.

Figure 2

Imports of Fair Trade Coffee into the United States, 2000–2015



Adapted from Fair Trade USA, *Fair Trade USA 2015 Almanac.* ©2016 by Fair Trade USA.

11

Over the course of the passage, the main focus shifts from

A) a discussion of the Fair Trade price floor to a consideration of how Fair Trade pricing might be improved.

B) an explanation of the Fair Trade pricing and classification system to an examination of certain consequences of that system.

C) an overview of the history of the Fair Trade movement to an examination of why some farmers are opposed to the movement.

D) an outline of the importance of the Fair Trade movement to a consideration of criticisms of the movement.

12

The passage indicates which of the following about the countries in which coffee is grown?

A) Their national economies are heavily dependent on coffee exports.

B) Their leaders have often been critical of the Fair Trade coffee movement.

C) Their annual export earnings from coffee sales have declined in recent years.

D) Their national economies can easily absorb small fluctuations in the price of coffee.

13

Which choice best supports the idea that Fair Trade pricing policies may encourage farmers to pursue short-term gain at the expense of the long-term success of the Fair Trade movement?

A) Lines 13-18 ("The primary . . . product")

B) Lines 18-20 ("As of . . . beans")

C) Lines 52-56 ("Which . . . $2.60")

D) Lines 56-61 ("If he . . . coffee")

14

As used in line 19, "fixed" most nearly means

A) repaired.
B) adjusted.
C) established.
D) prepared.

15

The author distinguishes between commodity coffee and specialty coffee in lines 26-33 ("Commodity . . . prices") primarily in order to

A) provide context necessary for understanding a challenge faced by the Fair Trade coffee movement.
B) demonstrate that the coffee classification system can sometimes be applied in arbitrary ways.
C) question whether the high prices usually commanded by specialty coffees are really justified.
D) emphasize the complexity of the classification system used for Fair Trade coffee.

16

As used in line 47, "simple" most nearly means

A) natural.
B) straightforward.
C) innocent.
D) silly.

17

The author of the passage suggests that the farmers who grow Fair Trade coffee

A) have sometimes been hesitant to adopt the sustainable practices that Fair Trade policies require.
B) may alter their agricultural practices in ways not anticipated in the Fair Trade production requirements.
C) have consistently lobbied for a higher Fair Trade price floor over the years.
D) are often frustrated by the complexities of Fair Trade pricing mechanisms.

18

Which choice provides the best evidence for the answer to the previous question?

A) Lines 37-39 ("It is . . . coffee")
B) Lines 40-44 ("To understand . . . price")
C) Lines 47-52 ("A farmer . . . lower")
D) Lines 61-65 ("Also . . . others")

19

According to figure 1, in which of the following years was the world market price for coffee the lowest?

A) 2001
B) 2008
C) 2010
D) 2014

20

Taken together, figure 1 and figure 2 support which statement about the Fair Trade coffee market in the United States?

A) Between 2000 and 2008, the Fair Trade premium price remained fairly constant even as the demand for Fair Trade coffee in the United States rose.

B) Between 2010 and 2015, the Fair Trade premium price remained fairly constant even as the demand for Fair Trade coffee in the United States declined.

C) Between 2002 and 2008, the Fair Trade premium price increased significantly even as the demand for Fair Trade coffee in the United States declined.

D) Between 2004 and 2012, the Fair Trade premium price remained steady even as the demand for Fair Trade coffee in the United States increased.

Questions 21-30 are based on the following passage.

This passage is adapted from Paul B. Wignall, *The Worst of Times: How Life on Earth Survived Eighty Million Years of Extinctions*. ©2015 by Princeton University Press. Approximately 252 million years ago, Earth experienced a mass extinction event, ending the Permian geologic period and starting the Triassic period.

For a long time the mass extinction was thought to be a protracted crisis spread over millions of years but by the late 1990s a growing number of studies were in favor of a short, sharp extinction. However, there is a big fly in the ointment when it comes to evaluating the timing of the crisis: quite a few Permian species survived for a short time into the Triassic.

Most Permo-Triassic boundary rocks contain a clear extinction layer marked by the point where a large number of species disappear forever. However, the overlying rocks often contain a mix of both typical Permian and new Triassic fossils. This "mixed" fauna [animals] persisted into the earliest Triassic, whereupon the Permian fossils—usually called holdover taxa in the paleontological literature—disappeared. In the Italian Dolomites the mixed fauna consists of Permian brachiopods and forams, some new short-lived forms (such as the bivalve *Towapteria* and several new species of forams), plus some longer-ranging forms that become briefly abundant at this level (the brachiopoc *Lingula* and the simple foram *Earlandia*). The significance of these fossils has long engendered debate and not a little controversy. Some have argue that the Permian holdovers are simply fossils that have been reworked from the underlying pre-extinction strata and incorporated into the younger sediments. However, this notion is easily dismissed because the mixed fauna contains new species that were not present before the first extinction. Others simply dismiss the mixed fauna as unimportant.

A recent review by Shen Shu-zheng of the Nanjing Institute of Geology and Palaeontology and twenty-one coauthors simply tried to brush the mixed fauna under the carpet when they concluded that the new species constituted a "trivial rise in diversity . . . but do not change the general overall

trend of overall decreasing diversity [at this time]." In their view the mass extinction becomes a clean-cut, single event with only a few "trivial" short-lived survivors that can essentially be ignored.

But the holdover species cannot be dismissed so easily.

Clarity to this debate has come from recent intensive collecting of the Permian and Triassic fossils in South China. Sampling from numerous locations has revealed the fate of marine life in shallow seas to deep basins. Much of the hard work was undertaken by Song Haijun, who together with his Wuhan colleagues Yin Hongfu and Tong Jinnan (two giants of the Permo-Triassic research scene in China) and me, documented the fates of 537 marine species belonging to 17 major groups during the crisis. The results reveal that the mixed fauna is actually much more diverse than previously appreciated. It represents a survival phase sandwiched between *two* mass extinction events, one at the end of the Permian, which eliminated 57% of species, and one at the start of the Triassic, which resulted in 71% species extinction. Barely 40 marine species remained after the double-punch crisis. Thanks to much recent effort in dating volcanic ash bands in the South China sections, we also now know that the interval between the extinctions lasted about 200,000 years.

So the Permo-Triassic mass extinction as now resolved consists of two abrupt mass extinctions separated by an interval of partial recovery. If I were to play devil's advocate and argue against our own conclusions, it could be said that the extinction was in fact just one continuous phase of extinction losses spread over 200,000 years with a final coup de grâce in the Early Triassic. Declining diversity, however, does not mark the interval with the mixed fauna, called the epilogue episode by Yin Hongfu; rather, it is a time of stable diversity marked by the appearance of new species and the loss of others. In South China the epilogue episode has a stable diversity level of around 150 species. The appearance of many new species (especially among brachiopods, bivalves, conodonts, ammonoids, and ostracods) suggests that benign conditions at this time favored the appearance of these new forms. These observations clearly indicate that the 200,000-year epilogue episode was not one of continued stress but rather a respite between two storms.

21

The primary purpose of the passage is to

A) discuss evidence supporting a new interpretation of the Permo-Triassic extinction.

B) identify the primary underlying cause of the Permo-Triassic extinction.

C) refute an argument that challenges a dominant theory about the Permo-Triassic extinction.

D) provide a catalog of fossil collections from the Permo-Triassic extinction found at two different sites.

22

Based on the passage, which of the following statements about the brachiopods and forams mentioned in lines 18-19 can reasonably be inferred?

A) They provide clear evidence for the single extinction event theory.

B) They were not found in proximity to later fossil samples.

C) They represent new forms that had been previously unknown to scientists.

D) They did not survive long beyond the end of the 200,000-year epilogue episode.

23

Based on the passage, certain scientists dismiss the significance of the Permian fossils in the mixed fauna collections on the assumption that

A) the sediments in which they currently appear also contain numerous Triassic fauna.

B) their presence in the sediments does not accurately reflect the extinction chronology.

C) they are abundant in the South China region but quite rare in other areas of the world.

D) they do not accurately represent the full range of Permian taxa.

24

Which choice provides the best evidence for the answer to the previous question?

A) Lines 11-13 ("However . . . fossils")
B) Lines 17-23 ("In the . . . *Earlandia*")
C) Lines 25-29 ("Some . . . sediments")
D) Lines 32-33 ("Others . . . unimportant")

25

Which choice most clearly contradicts the position on Permian holdovers attributed to Shen Shu-zheng and twenty-one coauthors?

A) Lines 46-48 ("Clarity . . . China")
B) Lines 48-50 ("Sampling . . . basins")
C) Lines 50-56 ("Much . . . crisis")
D) Lines 56-58 ("The results . . . appreciated")

26

According to the author, Yin Hongfu and Tong Jinnan are

A) known for taking controversial scientific positions.
B) relatively new to paleontological research.
C) among the leaders in their research field.
D) greatly influenced by the work of Shen Shu-zheng.

27

According to the author, the extinction event at the end of the Permian period

A) eliminated a smaller proportion of existing species than did the extinction event at the beginning of the Triassic.
B) lasted twice as long as did the extinction event at the beginning of the Triassic.
C) left more fossil deposits in the South China area than in the Italian Dolomites.
D) had a greater effect on marine species than it had on terrestrial species.

28

Lines 64-67 ("Thanks . . . years") primarily serve to

A) acknowledge a source of additional information about the Permo-Triassic extinction.
B) compare the Permo-Triassic extinction with another extinction event.
C) undermine a competing explanation of the Permo-Triassic extinction.
D) show one of the significant consequences of the Permo-Triassic extinction.

29

As used in line 70, "partial" most nearly means

A) limited.
B) devoted.
C) unbalanced.
D) biased.

30

As used in line 78 and line 80, "stable" most nearly means

A) reliable.
B) rigid.
C) steady.
D) calm.

Questions 31-41 are based on the following passages.

Passage 1 is adapted from Caroline H. Dall, *The College, the Market, and the Court; or, Woman's Relation to Education, Labor, and Law*. Originally published in 1867. Passage 2 is adapted from Sarah Cooper, "Woman Suffrage—Cui Bono?" Originally published in 1872.

Passage 1

[W]e don't care about *abstract rights*: what we want is our *own share* of the tangible acknowledged right which human governments confer. If in England this right depends on a property qualification, then we claim that there the property qualification shall endow woman as well as man with the right of suffrage. If in America it depends upon an inalienable right to life, liberty, and the pursuit of happiness, then we demand that our government recognize woman as so endowed, and receive her vote.

To the reviewer we say also, If the grounds of suffrage are vague and undetermined in *theory*, they may remain so, so far as our interference is concerned. What we ask to share is the steady right to vote, which has been actually granted, and never disputed, since our government was founded; and sufficiently pressed, we might add, that, if there is ever any chance of limiting the right of suffrage, we shall do all we can to secure its dependence on a certain amount of education, in preference to a certain amount of wealth. . . .

We intend to claim, in words, the right of suffrage; and why?

. . . [W]e claim the right of suffrage, because only through its possession can women protect themselves; only through its exercise can both sexes have equality of right and power before the law. Whenever this happened, character would get its legitimate influence; and it is just possible that men might become rational and virtuous in private, if association with women compelled them to *seem* so in public. . . .

The laws already existing prove conclusively to woman herself, that she has never had a real representative. What she seeks is to utter her own convictions, so that they shall redeem and save, not merely her own sex but the race.

That the right of suffrage would be a protection to women, we see from this fact, that it would at once put an end to three classes of laws:—

I. Those that protect her from violence.

II. Those made to protect her from fraud.

III. Those that protect society from the passions of both sexes.

The moment woman began to exercise this right, I think we should see moral significance streaming from every statute.

Passage 2

The fact that a large majority of women manifest so little interest in the question of suffrage, and are so palpably indifferent in regard to securing the privilege, is evidence of the absence of any very extended dissatisfaction with their present position. Female suffragists find their most formidable opponents among their own sex; and is not the instinct or inclination of this latter class as worthy of consideration as are the wishes and opinions of those who maintain the opposite view? Are they any less sincere? Should they be deemed illiberal, pusillanimous, apathetic, or imbecile, because they fail to discover in the ballot the Utopian glories of a redeemed womanhood?

There are those who believe women to be their own severest critics, their own harshest judges. Feeling thus, they have no tumultuous desire to secure the privilege of being tried by a so-called jury of their peers. They believe that, as a rule, the kindest judges of woman's strength or infirmity have been men; that in man she finds her truest and firmest champion. What women most lack, is charity and magnanimity to one another. Woman's weakness lies in her aptitude to forgive in the wrong place. . . . Will the ballot in woman's hand change all this? If so, God speed it. If men and women could only be made virtuous by Act of Congress, the prospect might be more re-assuring. The efforts hitherto made to legislate morality have not been very hopeful in their results. . . .

. . . The moral power which woman is capable of exerting might dominate the world, and in this lies her supreme potency. Man's political sovereignty could be made to dance attendance upon the behests of an uplifted, pure, exalted, and consecrated womanhood; but just in proportion as woman affects masculine accomplishments and becomes a *quasi* man, will the sentiments of respect, love, and reverence diminish, until they will eventually be reckoned among the lost arts; and, in the eager pursuit of coveted rights, woman should be wisely cautious to avoid the assumption and arrogance which she so sharply reprobates in man.

31

Which choice provides the best evidence that Dall advocates for a concept of female suffrage grounded in political facts rather than theoretical considerations?

A) Lines 1-3 ("[W]e don't . . . confer")
B) Lines 3-7 ("If in England . . . suffrage")
C) Lines 7-11 ("If in America . . . vote")
D) Lines 15-17 ("What . . . founded")

32

In the discussion of the qualifications needed for suffrage in Passage 1, Dall maintains that women

A) will require additional education to be eligible to vote.
B) can already meet the essential qualifications under which men are granted the right to vote.
C) will be unable to vote until they become property owners.
D) are hindered by the vagueness of the voting qualifications in some jurisdictions.

33

In Passage 1, Dall suggests that the right of suffrage would protect women by ultimately

A) leading to a ban on certain practices that disadvantage women.
B) allowing for the prosecution of men who deceive women.
C) encouraging men to meet higher moral standards.
D) permitting women to advance necessary legislation.

34

Which choice provides the best evidence for the answer to the previous question?

A) Lines 25-28 ("[W]e claim . . . law")
B) Lines 30-33 ("and it . . . public")
C) Lines 34-36 ("The laws . . . representative")
D) Lines 39-41 ("That . . . laws")

35

As used in line 46, "exercise" most nearly means

A) improve.
B) strengthen.
C) utilize.
D) enact.

36

In Passage 2, what does Cooper suggest about most women's attitude toward the privilege of suffrage?

A) They have shown little understanding of the meaning of suffrage.
B) They have failed to subject the argument for female suffrage to a sustained critique.
C) They have felt intimidated by those who support female suffrage.
D) They have given no indication that they genuinely desire suffrage.

37

The main purpose of Cooper's question in lines 59-62 ("Should . . . womanhood") is to

A) defend women who object to the pursuit of female suffrage.
B) criticize women for their lack of interest in voting.
C) concede that some women may be temperamentally unsuited to voting.
D) challenge women to advocate for female suffrage.

38

The characterization of the relationship between men and women in the last paragraph of Passage 2 serves mainly to support Cooper's point that

A) the achievements of women could rival those of ambitious men.

B) men find some behavior of women to be objectionable.

C) women routinely make demands of individuals in positions of power.

D) women can most effectively improve society through means other than voting.

39

The passages most strongly suggest that Dall and Cooper share which view of men's and women's moral characters and obligations?

A) Women have stronger moral values than men; therefore, women need to exert a positive moral influence over men.

B) Women view men as morally lacking; therefore, women should make every attempt to play a more public role in politics.

C) Both men and women are morally deficient; therefore, both would benefit from legislation addressing moral failings.

D) Both men and women seek moral improvement; therefore, they should work together to bring about social changes that promote morality.

40

Based on the passages, which choice best identifies a key difference in how Dall (Passage 1) and Cooper (Passage 2) view women's influence over men?

A) Dall argues that women will exert more influence over men if they share rights and power with men, whereas Cooper argues that women cannot influence men as long as they hold men in such low esteem.

B) Dall asserts that women can influence men through rational discourse and well-argued positions, whereas Cooper asserts that women can influence men through their respect and admiration for men.

C) Dall claims that women can influence men in public by insisting that men behave better in private, whereas Cooper claims that women will most successfully influence men in private by not challenging men in public.

D) Dall assumes that women would gain influence if they entered the political sphere, whereas Cooper asserts that by remaining outside of politics, women are most successful at influencing men.

41

Cooper's use of the word "redeemed" in line 62 could be considered a response to Dall's use of "redeem" in line 37 in that Cooper

A) shares Dall's belief that women need to reform themselves before attempting to reform others.

B) questions Dall's claim that women can have a significant impact on men.

C) mocks Dall's assertion that women can transform society through voting.

D) disagrees with Dall's conclusion that women alone can restore the human race.

1

Questions 42-52 are based on the following passage and supplementary material.

This passage is adapted from Seth S. Horowitz, *The Universal Sense: How Hearing Shapes the Mind*. ©2012 by Seth S. Horowitz.

The theory that tadpoles were basically deaf held for about forty years before anyone even tested it. The first attempt to record auditory responses from tadpoles' brains showed that the tadpoles had the expected poor hearing sensitivity. Case closed, it would seem. However, rather than establishing a scientific fact, this study highlighted one of the problems scientists face when studying things based on expectations rather than on testing basic facts: the tadpoles they recorded from were wrapped in wet gauze on a board out of the water and had airborne sounds played to them. Imagine that a frog scientist was trying to test your hearing while your head was underwater in a bathtub. The results would indicate that you have very poor hearing, with almost no responses to low-frequency sounds (as shallow water acts like a filter for higher-frequency ones) and a complete inability to localize where sounds were coming from. To the frog scientist, you are clearly deaf.

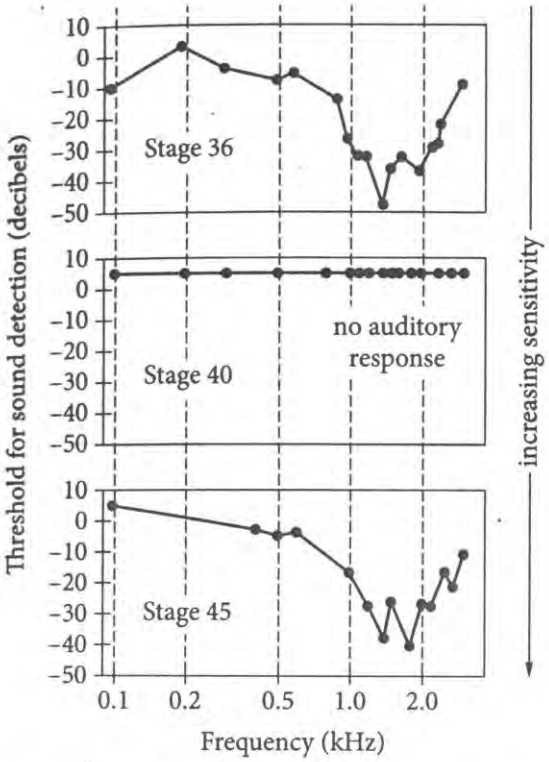
When you want to find something out about an animal's behavior, it is critically important to test it in a setting similar to its natural environment. Admittedly, this is very difficult—it is hard enough to carry out electrophysiology with the animal in a normal soundproof booth, and trying to keep an electrical system running with the degree of delicacy needed to record individual neural responses while keeping the animal's head under water is almost impossible. So, of course, decades after the issue was pronounced solved, I had to try it.

I went through massive amounts of aluminum foil (for grounding a pool of water), duct tape, and Tupperware containers to make a customized underwater recording tank, and it took me quite some time to figure out how to expose the tadpole's brain but not let the water into the opening (as well as how to be delicate enough with the surgery to make sure the tadpole could wake up and continue its development toward froghood). But when I'd done all that, I found out that about sixty years of supposition about tadpoles was wrong.

Tadpoles in fact have excellent underwater hearing. But even though they live underwater for most of their development, they are not fish and could not be tested the way you'd test fish. Early-stage tadpoles hear much in the way sharks or simple fish do, with the sound passing through the tissue on the side of their head and impinging directly on the oval window to transmit vibrations to the saccule and other developing organs in the inner ear. Later-stage tadpoles, who have both hindlimbs and forelimbs, have a functional low-frequency operecularis pathway from their sides and forelimbs to their inner ear, although the tympanic pathway doesn't appear until about twenty-four hours after they absorb the last of their tails to become froglets. The problem is that when I was trying to record from some tadpoles, I was getting nothing. Zip.

After about ten of these trials, I was pretty sure I was not getting faulty results, so I went to my advisor. We both noticed something odd: all of these "deaf" tadpoles were from one very short period of development, just before their front legs emerged. It turns out that in this brief period, about forty-eight hours long, while the low-frequency pathway is developing, the pieces of cartilage and muscle that attach the inner ear to the shoulder girdle block the opening on the side of the inner ear, the oval window, that let sound in when they were younger. In getting ready to move to a life where they have to hear vibrations from the ground, and eventually sounds in the air, they undergo a brief "deaf period." At the end of that forty-eight hours, their hearing suddenly returns, with a broader range of frequencies and better hearing at the low end.

Threshold Intensity for Sound Detection in Sample Tadpole at Three Metamorphic Stages



Adapted from Seth S. Boatright-Horowitz and Andrea Megela Simmons, "Transient 'Deafness' Accompanies Auditory Development during Metamorphosis from Tadpole to Frog." ©1997 by National Academy of Sciences.

Decreasing decibel values indicate decreasing intensity of sound and increasing sensitivity to sound.

12

The main purpose of the passage is to

A) provide a personal account of how a long-standing scientific controversy was resolved.

B) describe research that challenged a widely accepted scientific hypothesis.

C) discuss experiments that led scientists to change how they study some animals.

D) explain why seemingly similar studies yielded very different results.

13

Which choice best expresses the different meanings of "basically" (line 1) and "basic" (line 9), respectively?

A) Originally; conventional

B) Ordinarily; predictable

C) Primitively; vital

D) Essentially; fundamental

14

In the first paragraph, the discussion of a frog scientist mainly serves to

A) illustrate through a fanciful analogy the nature of a mistake that scientists made.

B) explain through a humorous comparison the approach that the author took in his research.

C) describe a complex natural phenomenon by providing an imaginary example.

D) challenge a generalization made by earlier researchers by citing a hypothetical exception.

15

As used in line 26, "normal" most nearly means

A) natural.

B) habitual.

C) conventional.

D) universal.

16

Information in the passage best supports which statement about the author's experiment testing tadpole hearing?

A) It required ingenuity and great precision.
B) It was conducted in tadpoles' natural habitat.
C) It generated less data than a soundproof booth experiment would have.
D) It was inspired by tests of hearing ability in fish.

17

Which choice provides the best evidence for the answer to the previous question?

A) Lines 21-23 ("When . . . environment")
B) Lines 24-30 ("Admittedly . . . impossible")
C) Lines 32-40 ("I went . . . froghood")
D) Lines 43-46 ("Tadpoles . . . fish")

18

Which choice best supports the idea that the author initially could not understand some of the data he was collecting during his experiment?

A) Lines 46-51 ("Early-stage . . . ear")
B) Lines 60-62 ("After . . . advisor")
C) Lines 62-64 ("We both . . . emerged")
D) Lines 64-71 ("It turns . . . younger")

19

The author most strongly suggests that the "problem" mentioned in line 58 was

A) actually a byproduct of ordinary tadpole development.
B) the first of his findings that undermined earlier theories about tadpoles.
C) the result of complications with his recording equipment.
D) an advantage for tadpoles that he initially overlooked.

20

According to the graph, at approximately which frequency did the sample tadpole have the most sensitivity to sound during stage 36?

A) 0.2 kHz
B) 1.0 kHz
C) 1.4 kHz
D) 2.5 kHz

Which statement about the sample tadpole is best supported by the data presented in the graph?

A) It showed no ability to detect sounds in the tested frequencies during and after stage 40.

B) It could detect high-frequency sounds during stages 36 and 40 but not during stage 45.

C) It was more sensitive to certain frequencies of sound during stage 36 than during stage 45.

D) It was able to detect sounds at both the lowest and the highest tested frequencies in all three stages shown.

52

Which choice best states the relationship between the data presented in the graph and claims made in the passage?

A) The data support the author's claim that the hearing of tadpoles returns after a period of deafness, but they provide no support for the claim that later-stage tadpoles can detect a broader range of frequencies than early-stage ones could.

B) The data support the author's claim that tadpoles undergo a short developmental stage of deafness, but they provide no support for the claim that the hearing of tadpoles is different after this deaf stage than it had been before it.

C) The data support the author's claim that tadpoles cannot hear low-frequency sounds at early stages of development, but they provide no support for the claim that tadpoles can hear higher-frequency sounds by the time they have matured into adult frogs.

D) The data support the author's claim that the low-frequency pathway takes 48 hours to develop, but they provide no support for the claim that tadpoles show no auditory response during the time when that pathway is developing.

STOP

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section.

2

Writing and Language Test

35 MINUTES, 44 QUESTIONS

Turn to Section 2 of your answer sheet to answer the questions in this section.

DIRECTIONS

Each passage below is accompanied by a number of questions. For some questions, you will consider how the passage might be revised to improve the expression of ideas. For other questions, you will consider how the passage might be edited to correct errors in sentence structure, usage, or punctuation. A passage or a question may be accompanied by one or more graphics (such as a table or graph) that you will consider as you make revising and editing decisions.

Some questions will direct you to an underlined portion of a passage. Other questions will direct you to a location in a passage or ask you to think about the passage as a whole.

After reading each passage, choose the answer to each question that most effectively improves the quality of writing in the passage or that makes the passage conform to the conventions of standard written English. Many questions include a "NO CHANGE" option. Choose that option if you think the best choice is to leave the relevant portion of the passage as it is.

Questions 1-11 are based on the following passage.

Pedro Flores's Yo-Yo

In 1927 at a hotel in Santa Monica, California, crowds gathered to see the stunning feats that hotel porter Pedro Flores, a young immigrant from the Philippines, was performing with a yo-yo. For generations Americans had played with a 1 toy called a bandalore, which, like Flores's yo-yo, consisted of a pair of disks separated by an axle with a string tied around it. The bandalore had been known in Europe for centuries, and Chinese children had played with a similar toy for several thousand years. But Flores's yo-yo had an important difference: it followed the Filipino design in

1

A) NO CHANGE
B) toy called—
C) toy called,
D) toy: called

which the string is looped around the axle rather than tied to it directly. This feature allows users to twirl the yo-yo in wide 2 arcs. This feature also allows users to let it spin in place at the end of its string, among other tricks. Seeing the delighted grins of his onlookers, Flores recognized an immediate business opportunity.

Flores soon left his job at the hotel to devote 3 itself to marketing his toy, which he trademarked with the name "yo-yo" (a name used in the Philippines, reputedly taken from an expression meaning "come back" in the Tagalog language). Trademark in hand, 4 several investors were approached by Flores, but they showed little interest. He was not discouraged, though, and that year he started hand-carving a small number of yo-yos and selling them to neighborhood children.

5 On the other hand, he met a pair of investors from Los Angeles—James Lewis and Daniel Stone—who were impressed with his efforts and provided the funding to begin manufacturing the toy on a larger scale.

2

Which choice most effectively combines the sentences at the underlined portion?

A) arcs; in addition, it allows users to
B) arcs, or they could as well
C) arcs or allows users to
D) arcs or

3

A) NO CHANGE
B) themselves
C) oneself
D) himself

4

A) NO CHANGE
B) approaching several investors is what Flores did,
C) Flores approached several investors,
D) the approach to several investors was by Flores,

5

A) NO CHANGE
B) To this end,
C) On an unrelated note,
D) A few months later,

2

6 Children have played with versions of the yo-yo for thousands of years; only the doll is considered to be older. Flores took his toy for a spin throughout the United States, hosting contests in which participants would try to perform yo-yo tricks 7 in succession, or in a series. Soon many people could "walk the dog" (running a yo-yo along the ground) or 8 collect multiple yo-yos (in different styles and colors). The contests increased excitement about the yo-yo, and sales

6

Which choice most effectively introduces the discussion in the paragraph?

A) NO CHANGE

B) Demonstrations like the ones Flores put on at the hotel remained crucial to the marketing of the yo-yo.

C) Meanwhile, other inventors had acquired patents for similar toys and were trying to improve on the yo-yo's design.

D) Flores did not originally intend to make a lot of money from his yo-yo business—he merely wanted to be his own boss.

7

A) NO CHANGE

B) in a successive series.

C) successively, or one after another.

D) in succession.

8

Which choice provides an example that best supports the information in the previous sentence?

A) NO CHANGE

B) send the toy "around the world" (swinging it in a big circle before snapping it back into the hand).

C) purchase a yo-yo from the Flores Yo-Yo Company (for as little as 15 cents and as much as $1.50).

D) receive prizes for designing their own homemade yo-yos (using whatever material they chose).

climbed. By 1929 Flores had opened three factories 9 that employed 600 workers and produced 300,000 yo-yos every day to keep up with the demand for his product.

In 1930 Flores sold his company to businessman Donald F. 10 Duncan he continued to work for the company, traveling around the United States to show what the yo-yo could do. The tournaments he hosted 11 are attracting ever-larger crowds. Though generations of children have grown up knowing only Duncan yo-yos, it was Flores who first popularized the toy under its current name and design. Without him, the yo-yo might never have become the beloved American toy it is today.

9

Which choice provides the best support for the information in the previous sentence?

A) NO CHANGE
B) and continued promoting the yo-yo contests of skill and endurance that were occurring across the country.
C) and coined the advertising tagline "If it isn't a Flores, it isn't a yo-yo," helping ensure the popularity of his toy.
D) and had begun marketing the product directly to children rather than to parents, becoming one of the first in American advertising to use such a strategy.

10

A) NO CHANGE
B) Duncan. But
C) Duncan but
D) Duncan, however, he

11

A) NO CHANGE
B) attracted
C) will attract
D) have been attracting

Questions 12-22 are based on the following passage and supplementary material.

Making Waves in Biology

While all animals have mechanisms for regulating body temperature, it was commonly 12 understood by most people that only mammals and birds are endotherms—organisms that can raise their body temperature above that of their surroundings by generating heat. Fish are typically ectotherms—organisms that depend upon their environment for heat. However, a recent discovery about the opah fish has been making waves among biologists: opah are endotherms.

When biologists measured the body temperature of freshly caught opah, they recorded values that were on average 5°C higher than the water temperature—an entirely unexpected result. While some fish can keep individual body parts, such as the brain, heart, and muscles, warm, the opah was found to maintain a temperature higher than that of the surrounding water throughout its entire body. 13 Even so, the opah kept its body temperature nearly constant as 14 one descended to the colder depths. This was a novel 15 observation; whole-body endothermy in a species of fish.

12

A) NO CHANGE
B) understood, in that it was widely believed,
C) and generally understood
D) understood

13

A) NO CHANGE
B) Therefore,
C) Instead,
D) Moreover,

14

A) NO CHANGE
B) they
C) it
D) those

15

A) NO CHANGE
B) observation
C) observation,
D) observation:

2

16 The opah's endothermy stems from two adaptations. First, heat is produced by exercising the unusually large muscles attached to the pectoral (or side) fins: as opah flap these fins for propulsion, the capillary-rich muscles use oxygen in the blood to release energy, including 17 heat—from nutrients. Second, heat loss is minimized by the structure of the opah's gills: they are insulated by a thick layer of fat and contain a net of interleaved blood vessels that is not found in the gills of other fish and that retains heat as the blood absorbs oxygen from seawater. This unique anatomical configuration ensures that body heat is retained.

16

Which choice provides the best introduction to the paragraph?

A) NO CHANGE
B) There are at least two reasons why most fish living in cold water tend to move slowly.
C) Scientists obtained a sample of gill tissue from an opah.
D) The opah's ability to control its body temperature has many advantages.

17

A) NO CHANGE
B) heat,
C) heat:
D) heat)

2

Whole-body endothermy differentiates opah from other fish and **18** are to have consequences for the habitat and behavior of opah. Albacore tuna, fish that warm only certain body parts, spend most of their time in shallow **19** water. The shallow water is where they rely on solar heat for warmth. In one study, researchers found that albacore spend **20** 58.2 percent of the daytime within 50 meters of the surface of the water. Opah, by

18

A) NO CHANGE
B) having
C) has
D) have had

19

Which choice most effectively combines the sentences at the underlined portion?

A) water,
B) water; that is
C) water because that is
D) water: the water

20

Which choice presents accurate information from figure 1?

A) NO CHANGE
B) 58.2 percent of the daytime between 50 and 100 meters below
C) 7.1 percent of the daytime within 50 meters of
D) 7.1 percent of the daytime between 50 and 100 meters below

contrast, spend less than 10 percent of the daytime that close to the surface. 21 Albacore spend larger proportions of the daytime at a single depth, while opah seem to move more frequently, making opah capable of hunting prey that are found in the deeper parts of the ocean.

Figure 1

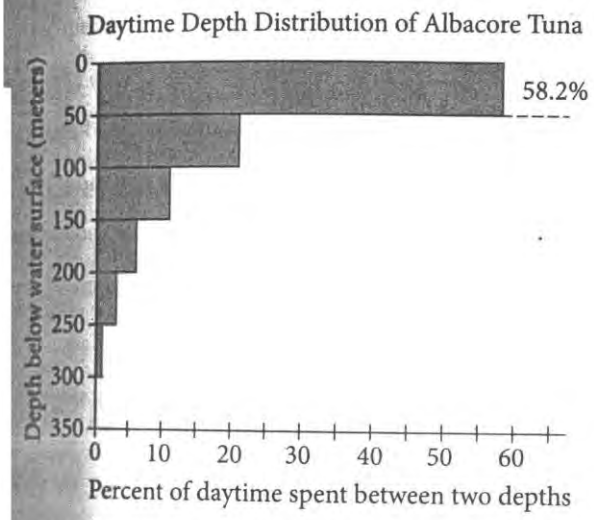
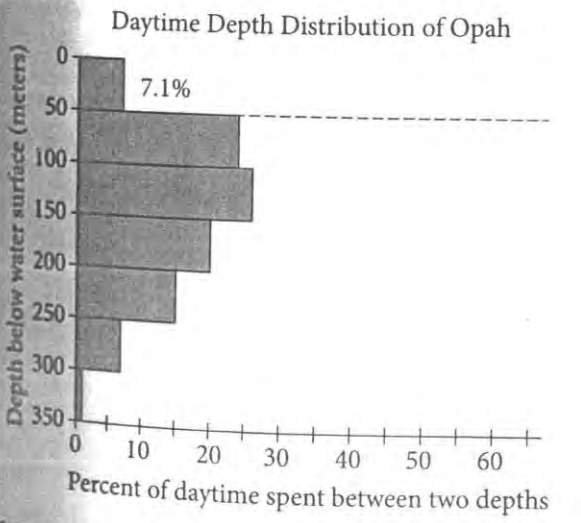


Figure 2



Figures adapted from Nicholas C. Wegner et al., "Whole-Body Endothermy in a Mesopelagic Fish, the Opah, *Lampris guttatus*." ©2015 by American Association for the Advancement of Science.

21

The writer wants to use information from the figures to set up the claim in the next part of the sentence. Which choice best accomplishes this goal?

A) NO CHANGE

B) Opah swim at greater depths and spend a larger proportion of their time deeper underwater than albacore do during the daytime,

C) Opah rarely swim below 350 meters underwater during the daytime, likely because temperatures at that depth are too low,

D) Scientists also have additional data about how much time opah and albacore spend at various depths at night,

2

The discovery that opah are endothermic is a small but exciting step in better understanding the many ways in which fish adapt to and **22** ways in which they thrive in the oceans. It is also an example of how a single discovery can overturn a common understanding. As Nicholas Wegner, one of the ecologists who participated in the study, said, "Nature has a way of surprising us with clever strategies where you least expect them."

22

A) NO CHANGE
B) their thriving
C) thrive
D) how they thrive

2

Questions 23-33 are based on the following passage.

Ecotourism: Sustainable Travel

Tourism has become one of the largest and most profitable industries in the world. Unfortunately, in many places it also contributes to the degradation of landscapes and ecosystems. In response, the industry has developed 23 ecotourism; a type of tourism designed to mitigate environmental damage. When practiced responsibly, ecotourism can be a boon for local 24 economies. Ecotourism also allows beautiful landscapes and rare plants and animals to survive for years to come.

23

A) NO CHANGE
B) ecotourism. A
C) ecotourism (a
D) ecotourism, a

24

Which choice most effectively combines the sentences at the underlined portion?

A) economies, allowing, simultaneously,
B) economies while allowing
C) economies; ecotourism allows
D) economies, but it also allows

2

In many ways, ecotourism companies are similar to other businesses in the tourism 25 industry, they hire, cooks, cleaners, guides, and others to house and feed vacationers and show them around the local area. 26 One benefit is that ecotourism companies try to minimize the impact on the natural environment. To learn how to do this, company leaders often obtain professional credentials such as the Certificate in Sustainable Tourism 27 Management. Offered by the George Washington University and the International Ecotourism Society (TIES). This online learning program gives advice about topics such as measuring environmental effects and following green guidelines. Managers who have received this training 28 and then pass on their knowledge to other workers on the job.

25

A) NO CHANGE
B) industry: they hire
C) industry—they hire,
D) industry, they hire:

26

Which choice results in the best transition from the previous sentence to this one?

A) NO CHANGE
B) An additional service is that
C) The primary difference is that
D) DELETE the underlined portion, adjusting the capitalization as needed.

27

A) NO CHANGE
B) Management; offered
C) Management, it is offered
D) Management offered

28

A) NO CHANGE
B) and also pass
C) then passing
D) then pass

2

29 Alaska has long been popular with tourists from around the world. Vacationers visit Alaska for 30 it's rugged landscapes and abundant wildlife, but these very features are threatened by pollution. 31 To address this danger, companies such as Alaska Wildland Adventures provide nature tours and accommodations that minimize ecosystem disruption. Like other tour companies, Alaska Wildland Adventures uses guides to take visitors on whale-watching boat trips and nature hikes to see bears and other wildlife. The company's guides, however, take only small groups and 32 are equipped to handle any unforeseen weather emergencies. The company also takes steps to reduce pollution—powering its lodges with hydroelectric systems rather than gas-powered generators—and, like many ecotourism companies, donates a portion of its profits to conservation organizations.

29

Which choice most effectively sets up the main discussion of the paragraph?

A) NO CHANGE
B) A good place to see ecotourism in action is the wilderness of Alaska.
C) Alaska offers a wide range of job opportunities for those who aspire to careers in tourism.
D) Encompassing more than six million acres, Denali National Park and Preserve is located in the heart of the Alaskan wilderness.

30

A) NO CHANGE
B) its
C) their
D) there

31

Which choice provides the best transition from the previous sentence?

A) NO CHANGE
B) To appease environmental activists,
C) Despite this threat,
D) Appealing to adventure seekers,

32

Which choice provides a supporting example that is most similar to the other example in the sentence?

A) NO CHANGE
B) have skills especially adapted for the complex Alaskan terrain.
C) maintain a distance from the animals so as not to disturb them.
D) offer a wealth of specialized knowledge about Alaska's natural history.

2

Although ecotourism helps mitigate the damage large groups of visitors cause to fragile ecosystems, it must still be practiced carefully. According to Ayako Ezaki, the director of communications for TIES, companies must take care to limit how many people they bring to a given location: "They need to consider the capacity of the destination," she insists. If the ecotourism industry can successfully balance the potential vulnerability of wilderness areas with the desires of tourists, 33 and if it can harmonize these interests, it holds great promise for nature lovers and the natural world alike.

33

A) NO CHANGE
B) and if it can make these interests complement one another,
C) and if it can find a way to balance them,
D) DELETE the underlined portion.

2

Questions 34-44 are based on the following passage.

Slow Down and Listen

A popular application on audio devices allows users to increase the playing speed of podcasts or audiobooks, reducing the time required to hear an entire program. This 34 growth has been welcomed by many who want to listen to lengthy programs but lack the time to do so. The convenience of "speed listening" 35 may be its greatest advantage. By obscuring their dramatic effects, the practice drains the emotional power from the best audio programs: stories.

Because speed listening takes advantage of the brain's ability to absorb information quickly and efficiently, it may be an ideal way to consume tutorials or other factual material. Today's sophisticated devices can minimize many side effects of the speeding-up process: they can prevent voice pitch from rising, for instance, and can cut program lengths with little noticeable change by removing gaps and pauses. On the other hand, these very technologies have a negative impact on stories—the gaps and pauses are often part of the story being told.

34

A) NO CHANGE
B) expansion
C) development
D) incident

35

Which choice provides the most effective transition to the next sentence?

A) NO CHANGE
B) has led many journalists to endorse it.
C) comes with a cost, however.
D) has perhaps been overestimated, though.

2

A story is rarely meant to move at a uniform, quick speed. Changes in emphasis, hesitations, and even throat clearings can convey moods and **36** invoke particular responses in the listener. Episodes of the podcast offered by the storytelling group The Moth, which relate such events as a writer's solo dogsled trek across Arctic America and a doctor's struggle to save the life of Mother Teresa, **37** are delivered by engaging storytellers who connect with their audiences through verbal cues. **38** Speeding up those stories reduces them to streams of information, breaking that connection. Perhaps the most famous audio program of all **39** time Orson Welles's 1938 radio broadcast *The War of the Worlds*, relied on varied pacing, with interruptions and meaningful silences, to generate a sense of urgency. The dramatic effects that led many of Welles's listeners to believe a Martian invasion was really happening would surely have been lost at high speed.

36

A) NO CHANGE
B) evoke
C) infer
D) emit

37

A) NO CHANGE
B) were
C) will be
D) had been

38

The writer is considering deleting the underlined sentence. Should the sentence be kept or deleted?

A) Kept, because it explains how the example in the previous sentence supports the main claim of the passage.
B) Kept, because it explains a factor that may contribute to the reception of the group's podcasts.
C) Deleted, because it interrupts the paragraph's main focus on storytelling with an irrelevant detail.
D) Deleted, because it fails to provide a transition to the example given in the next sentence.

39

A) NO CHANGE
B) time,
C) time—
D) time;

2

Forcing a uniformly quick pace onto a story [40] makes reading information on paper more appealing. Consider a long section of dialogue in an [41] audiobook, without pauses, the back-and-forth of the characters runs together, making it difficult for a listener [42] in following the narrative thread. The same is true of stories told by comedians, who are especially dependent on timing: [43] without the right pauses and breaks, many of the best laugh lines may not even make sense.

40

Which choice best establishes the topic of the paragraph?

A) NO CHANGE
B) can make characters' interactions hard to grasp.
C) can also add momentum to a story.
D) can even damage comprehensibility.

41

A) NO CHANGE
B) audiobook without pauses,
C) audiobook—without pauses—
D) audiobook: without pauses,

42

A) NO CHANGE
B) with following
C) to follow
D) who follows

43

A) NO CHANGE
B) without the right pauses and breaks at the correct moment,
C) without the pauses and breaks that determine their timing,
D) DELETE the underlined portion.

It takes time to absorb the nuances of stories; they engage not just our verbal understanding but also our memories, impressions, and feelings. 44 Listening at high speed, we may miss the point of tuning in at all.

44

The writer wants a conclusion to the passage that reinforces claims made earlier about the potential impact of speed listening. Which choice best accomplishes this goal?

A) NO CHANGE

B) With the advent of new technologies, the power of storytelling is unlikely to change.

C) Though we may lose some of these nuances with speed listening, it is ultimately a useful practice.

D) If we want to preserve these distinctive qualities, speed listening technologies must be improved.

STOP

If you finish before time is called, you may check your work on this section only. Do not turn to any other section.

No Test Material On This Page

3

Math Test – No Calculator

25 MINUTES, 20 QUESTIONS

Turn to Section 3 of your answer sheet to answer the questions in this section.

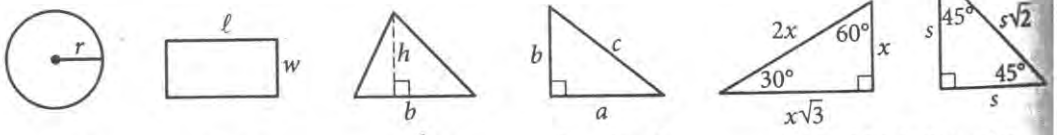
DIRECTIONS

For questions 1-15, solve each problem, choose the best answer from the choices provided, and fill in the corresponding bubble on your answer sheet. **For questions 16-20**, solve the problem and enter your answer in the grid on the answer sheet. Please refer to the directions before question 16 on how to enter your answers in the grid. You may use any available space in your test booklet for scratch work.

NOTES

1. The use of a calculator **is not permitted**.
2. All variables and expressions used represent real numbers unless otherwise indicated.
3. Figures provided in this test are drawn to scale unless otherwise indicated.
4. All figures lie in a plane unless otherwise indicated.
5. Unless otherwise indicated, the domain of a given function f is the set of all real numbers x for which $f(x)$ is a real number.

REFERENCE



$A = \pi r^2$
$C = 2\pi r$

$A = \ell w$

$A = \frac{1}{2}bh$

$c^2 = a^2 + b^2$

Special Right Triangles

$V = \ell wh$

$V = \pi r^2 h$

$V = \frac{4}{3}\pi r^3$

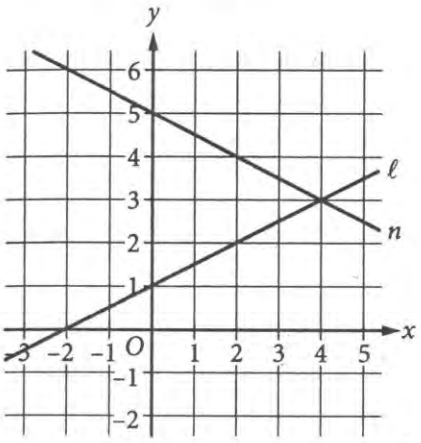
$V = \frac{1}{3}\pi r^2 h$

$V = \frac{1}{3}\ell wh$

The number of degrees of arc in a circle is 360.
The number of radians of arc in a circle is 2π.
The sum of the measures in degrees of the angles of a triangle is 180.

1

The equations in a system are represented by line ℓ and line n in the xy-plane shown.



Which of the following is true about the point $(0, 1)$?

A) The point $(0, 1)$ lies on line ℓ only.

B) The point $(0, 1)$ lies on line n only.

C) The point $(0, 1)$ lies on both lines.

D) The point $(0, 1)$ lies on neither line.

2

$$f(x) = 2x - 9$$

For the function f above, what is the value of $f(-1)$?

A) -11

B) -7

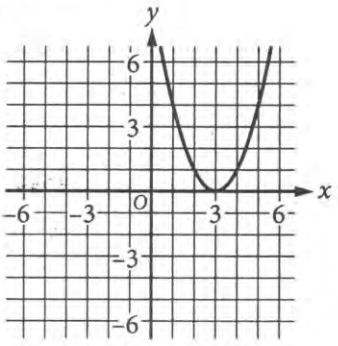
C) 7

D) 11

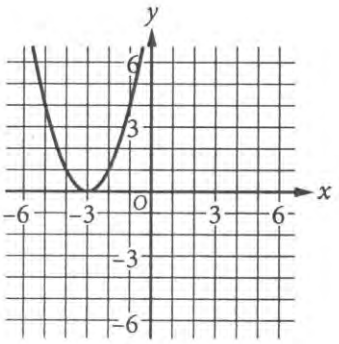
3

Which of the following is the graph of $y = x^2 - 3$ in the xy-plane?

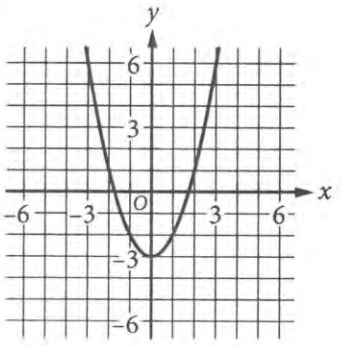
A)



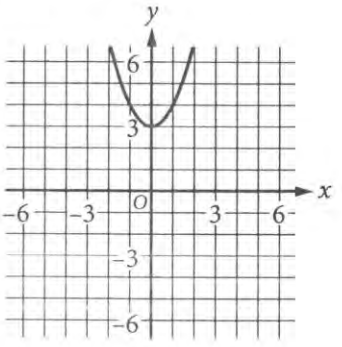
B)



C)



D)



4

The value, in dollars, of a certain bicycle t years after it was purchased can be modeled by the function $f(t) = 200(0.95)^t$. According to the model, what was the value, in dollars, of the bicycle when it was purchased?

A) 20

B) 95

C) 200

D) 950

5

$$y = 6x$$

$$y = -6x + 18$$

The solution of the given system of equations is (x, y). What is the value of x ?

A) $\frac{2}{3}$

B) $\frac{3}{2}$

C) 54

D) 108

6

$$d(x) = -30x + 87$$

The function d above models a soccer ball's distance, in feet, from the goalie x seconds after a player passed the ball, where the ball remains on the ground and $0 \leq x \leq 1.5$. Which of the following is the best interpretation of the y-intercept of the graph in the xy-plane of $y = d(x)$?

A) The soccer ball was passed at a distance of approximately 30 feet from the goalie.

B) The soccer ball was passed at a distance of approximately 87 feet from the goalie.

C) The soccer ball was moving toward the goalie at a speed of approximately 30 feet per second.

D) The soccer ball was moving toward the goalie at a speed of approximately 87 feet per second.

7

x	y
0	−2
4	0
8	2

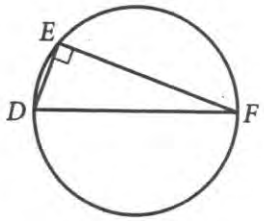
For selected points on a line in the xy-plane, the table above gives the x-values of the points and their corresponding y-values. Which of the following is an equation of the line?

A) $2x + y = -2$

B) $2x - y = -2$

C) $x + 2y = 4$

D) $x - 2y = 4$



The figure above is a circle with diameter $\overline{DF}$. If the radius of the circle is 6.5 and $DE = 5$, what is the area of triangle DEF ?

A) 15

B) 30

C) 32.5

D) 78

$$g(x) = 7(2)^x$$

For the given function g, what is the y-intercept of the graph of $y = g(x)$ in the xy-plane?

A) $(0, 7)$

B) $(0, 14)$

C) $(7, 0)$

D) $(14, 0)$

10

$$h = -\frac{1}{8}w + 4.5$$

The formula above relates the height h, in inches, of a tapered piece of roofing insulation to the width w, in feet, of the insulation. Which of the following correctly expresses the width, in feet, of the piece of insulation in terms of its height in inches?

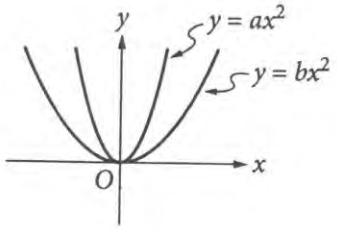
A) $w = \frac{h - 4.5}{8}$

B) $w = \frac{-h + 4.5}{8}$

C) $w = 8(h + 4.5)$

D) $w = -8(h - 4.5)$

11



The graphs of $y = ax^2$ and $y = bx^2$, where a and b are constants, are shown. Which of the following must be true?

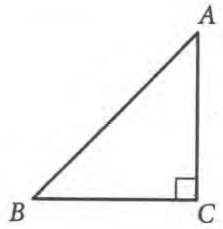
A) $0 < a < b$

B) $0 < b < a$

C) $a < 0 < b$

D) $a < b < 0$

12



Note: Figure not drawn to scale.

The figure shows right triangle ABC. Which of the following must be equal to the length of side $\overline{BC}$?

A) $AB\ \cos(A)$

B) $\dfrac{AB}{\cos(A)}$

C) $AB\ \sin(A)$

D) $\dfrac{AB}{\sin(A)}$

13

$$\sqrt{(t-2)^2} = t - 2$$

If a is a solution to the equation above, which of the following must be true?

A) $a \geq 2$

B) $a = 2$

C) $-2 \leq a \leq 2$

D) $a \leq -2$

14

Hannah saves $\frac{2}{5}$ of her salary each month, and Wyatt saves $\frac{3}{8}$ of his salary each month. Together, they save a total of \$1,200 each month. If h and w represent Hannah's and Wyatt's monthly salaries, in dollars, respectively, which of the following describes a relationship between their monthly salaries?

A) $h + w = 1{,}200$

B) $2h + 3w = 1{,}200$

C) $15h + 16w = 48{,}000$

D) $16h + 15w = 48{,}000$

15

$$\frac{5x-8}{x-3} + \frac{7}{3-x}$$

Which of the following is equivalent to the given expression, where x is not equal to 3 ?

A) 5

B) $5x$

C) $\dfrac{5x-1}{x-3}$

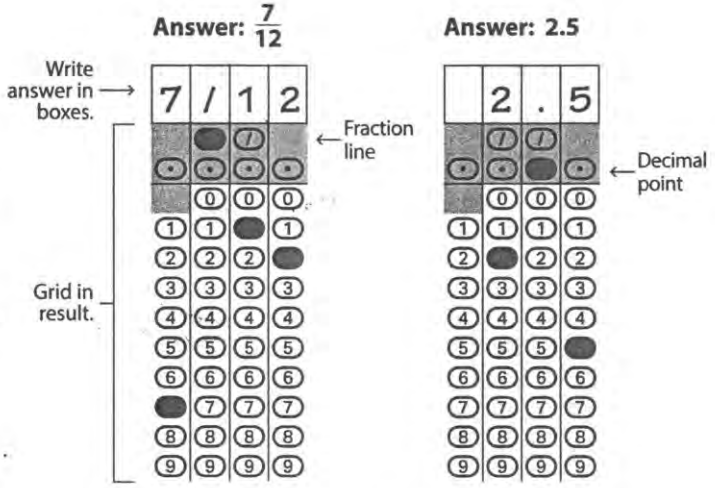
D) $10 - \dfrac{1}{x}$

3

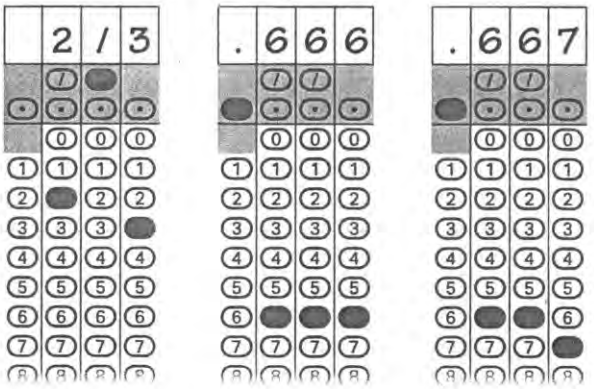
DIRECTIONS

For questions 16-20, solve the problem and enter your answer in the grid, as described below, on the answer sheet.

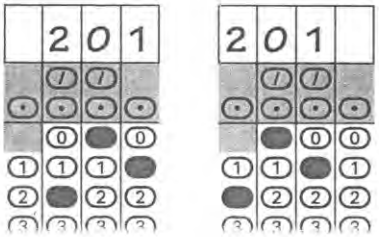
1. Although not required, it is suggested that you write your answer in the boxes at the top of the columns to help you fill in the bubbles accurately. You will receive credit only if the bubbles are filled in correctly.
2. Mark no more than one bubble in any column.
3. No question has a negative answer.
4. Some problems may have more than one correct answer. In such cases, grid only one answer.
5. **Mixed numbers** such as $3\frac{1}{2}$ must be gridded as 3.5 or 7/2. (If  is entered into the grid, it will be interpreted as $\frac{31}{2}$, not $3\frac{1}{2}$.)
6. **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.



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



Answer: 201 – either position is correct



NOTE:
You may start your answers in any column, space permitting. Columns you don't need to use should be left blank.

41

3

16

If $5a + 1 = 9a$, what is the value of a ?

17

$$4x - 20 = m(x - 5)$$

In the given equation, m is a constant. If the equation has infinitely many solutions, what is the value of m ?

18

$$18x^3 - 24x^2 + 6x$$

The given expression is equivalent to $ax(x - 1)(bx - 1)$, where a and b are constants. What is the value of b ?

$$x^2 + y^2 = K$$

In the given equation, K is a constant. The graph of the equation in the xy-plane is a circle with center at $(0, 0)$ and a radius of 10. What is the value of K ?

20

$$x^2 - 6x - 11 = 0$$

If $3 + 2\sqrt{n}$ is a solution to the given equation, where n is a positive constant, what is the value of n ?

STOP

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section.

4

Math Test – Calculator

55 MINUTES, 38 QUESTIONS

Turn to Section 4 of your answer sheet to answer the questions in this section.

DIRECTIONS

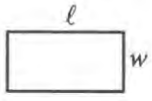
For questions 1-30, solve each problem, choose the best answer from the choices provided, and fill in the corresponding bubble on your answer sheet. **For questions 31-38,** solve the problem and enter your answer in the grid on the answer sheet. Please refer to the directions before question 31 on how to enter your answers in the grid. You may use any available space in your test booklet for scratch work.

NOTES

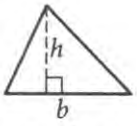
1. The use of a calculator **is permitted**.
2. All variables and expressions used represent real numbers unless otherwise indicated.
3. Figures provided in this test are drawn to scale unless otherwise indicated.
4. All figures lie in a plane unless otherwise indicated.
5. Unless otherwise indicated, the domain of a given function f is the set of all real numbers x for which $f(x)$ is a real number.

REFERENCE

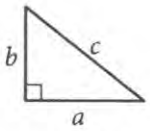
$A = \pi r^2$
$C = 2\pi r$



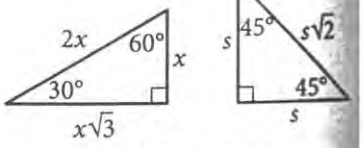
$A = \ell w$



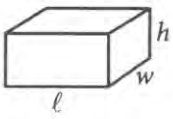
$A = \frac{1}{2}bh$



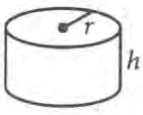
$c^2 = a^2 + b^2$



Special Right Triangles

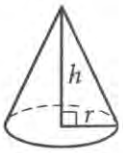


$V = \ell wh$



$V = \pi r^2 h$

$V = \frac{4}{3}\pi r^3$



$V = \frac{1}{3}\pi r^2 h$

$V = \frac{1}{3}\ell wh$

The number of degrees of arc in a circle is 360.
The number of radians of arc in a circle is 2π.
The sum of the measures in degrees of the angles of a triangle is 180.

1

Response	Frequency
Once a week or more	4
Two or three times a month	15
About once a month	27
A few times a year	74
Almost never	52
Never	28
Total	200

The table gives the results of a survey of 200 people who were asked how often they see a movie in a theater. How many people responded either "never" or "almost never"?

A) 24

B) 52

C) 80

D) 120

2

x	$f(x)$
2	4
3	6

For a linear function f, the table shows two values of x and their corresponding values of $f(x)$. Which of the following could define f?

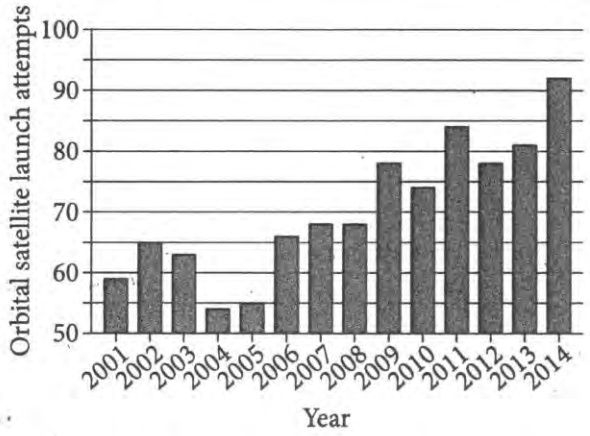
A) $f(x) = 2x$

B) $f(x) = x$

C) $f(x) = x + 4$

D) $f(x) = x + 6$

3



The bar graph shows the number of orbital satellite launch attempts each year from 2001 through 2014. Which year had the largest decrease in launch attempts from the previous year?

A) 2002

B) 2004

C) 2012

D) 2014

4

If 1 kilowatt-hour of electrical energy is transmitted in $\frac{1}{4}$ hour, how much electrical energy is transmitted in one hour?

A) $\frac{1}{4}$ kilowatt-hour

B) $\frac{3}{4}$ kilowatt-hour

C) $\frac{5}{4}$ kilowatt-hours

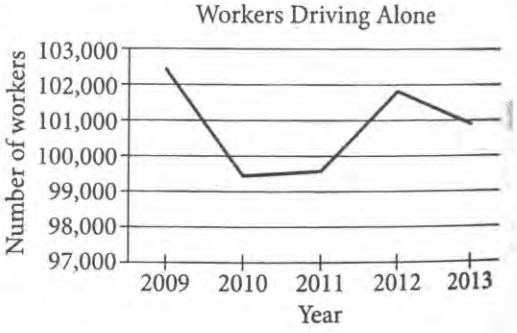
D) 4 kilowatt-hours

Questions 5 and 6 refer to the following information.

In 2014 there were approximately 159,000 workers aged 16 years and older in Boulder County, Colorado. The table summarizes these workers' primary mode of transportation to work, but does not include those aged 16 and older who primarily drive to work alone.

Primary mode of transportation to work	Number of workers 16 years and older
Carpool	13,000
Public transport	9,000
Walking	8,000
Other	9,000
None—work from home	17,000

From 2009 to 2013, some workers aged 16 years and older in Boulder County chose driving alone as their primary mode of transportation to work. The graph summarizes these data.



According to the table, in 2014 what was the ratio of the number of workers who chose walking as their primary mode of transportation to work to the number of workers who chose carpooling?

A) 8 to 13
B) 8 to 21
C) 13 to 8
D) 13 to 21

Which of the following is closest to the percent decrease of workers who chose driving alone as their primary mode of transportation to work from 2009 to 2011?

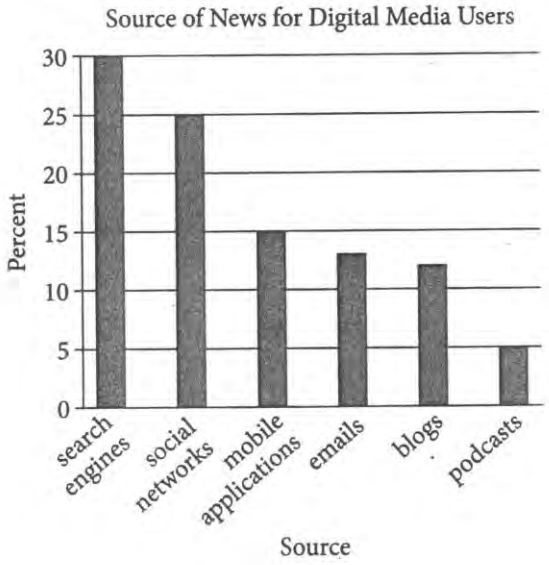
A) 1%
B) 3%
C) 97%
D) 99%

$$f(x) = 2x + 5$$
$$g(x) = 2^x + 1$$

For the functions f and g shown, how much greater is $g(6)$ than $f(6)$?

A) 82
B) 48
C) 20
D) 4

Questions 8 and 9 refer to the following information.



For a survey, 3,003 people were selected at random from all adults in the United States, and each identified his or her favorite source for news. A total of 1,381 of the 3,003 respondents identified one of six digital media sources as his or her favorite source. The distribution of the digital media sources for these 1,381 respondents is shown in the bar graph above.

8

Of the following, which is closest to the ratio of the number of respondents who identified podcasts to the number who identified search engines as their favorite source for news?

A) 1 to 6
B) 1 to 5
C) 1 to 4
D) 1 to 3

9

Approximately how many of the 1,381 respondents identified blogs as their favorite source for news?

A) 12
B) 28
C) 166
D) 360

A study of a population of kingfishers, a type of bird, found that the median number of eggs the birds laid per clutch, or eggs laid at a single time, was 4. Based on this information, which of the following statements must be true?

A) The mean number of eggs in each clutch was 4.

B) The range of the number of eggs in each clutch was 4.

C) All of the kingfisher clutches had 4 or more eggs.

D) At least half of the kingfisher clutches had 4 or more eggs.

11

The function f is a linear function. If $f(5) = 9$ and $f(8) = 3$, which of the following equations defines f?

A) $f(x) = -0.5x + 11.5$

B) $f(x) = 0.5x - 1$

C) $f(x) = -2x + 19$

D) $f(x) = -2x + 14$

Questions 12 and 13 refer to the following information.

The daily fees and tax for renting a car from a car rental company are summarized in the table below.

Rental Car Daily Fees

Car Size	Daily base fee	Daily administrative fee	Daily tax	Allowable miles
Economy	$39.00	$1.10	$1.95	Unlimited
Intermediate	$42.00	$1.10	$2.10	Unlimited
Standard	$45.00	$1.10	$2.25	Unlimited
Full-size	$48.00	$1.10	$2.40	Unlimited
Minivan	$110.00	$1.10	$5.50	Unlimited

A onetime charge of $150.00 is added to the daily fees and tax for any car rental that is returned to a different location than from where it was picked up.

12

The Jones family plans to rent a minivan and return the minivan to the same location where it was picked up. What is the maximum number of days the family can rent the minivan without spending more than $550 ?

A) 2

B) 3

C) 4

D) 5

13

The Paulson family is taking a trip to Florida. The entire round-trip will take 2 days. They plan to rent a car in Ohio and drop it off in Florida the same day. On the return trip, the family will rent the same type of car in Florida and return it in Ohio that same day. The equation below represents the total car rental cost, T, in dollars.

$$T = 2(r + 150)$$

What must the variable r represent in the equation?

A) The total number of days the family is renting a car

B) The total daily charges for renting the car for one day

C) The total daily charges for renting the car for two days

D) The drop-off fee for returning the car to a separate location than from where it was picked up

14

x	1	2	3	4
y	1,000	900	810	729

The table shows several values of x and their corresponding values of y. Which of the following types of functions best describes the relationship between y and x, where x is the independent variable and y is the dependent variable?

A) Decreasing exponential
B) Increasing exponential
C) Decreasing linear
D) Increasing linear

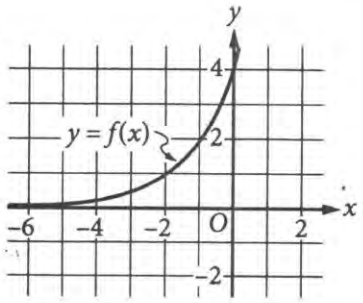
15

$$3(x + 4) = 2(x + c) + x$$

In the equation shown, c is a constant. For what value of c does the equation have infinitely many solutions?

A) 4
B) 6
C) 8
D) 12

16



The graph of the function f is shown in the xy-plane. The function is defined by $f(x) = (2)^{x+k}$, where k is a constant. What is the value of k ?

A) −4
B) −2
C) 2
D) 4

17

Of a group of 90 high school juniors and seniors, x do not participate in school clubs. If $\frac{1}{3}$ of the students in the group who participate in a school club are seniors, which of the following represents the number of students, F, in the group who are juniors and participate in a school club?

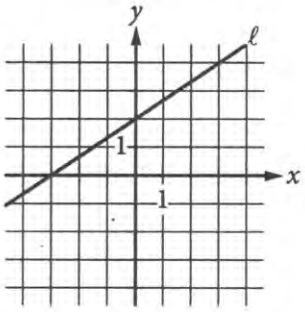
A) $F = \frac{1}{3}(90 - x)$

B) $F = \frac{1}{3}(45 - x)$

C) $F = \frac{2}{3}(45 - x)$

D) $F = \frac{2}{3}(90 - x)$

18



Which of the following is an equation of line ℓ in the xy-plane shown?

A) $2x - 3y = -6$

B) $2x - 3y = 6$

C) $3x - 2y = -6$

D) $3x - 2y = 6$

19

The data set in the table gives the high temperature, in degrees Celsius (°C), in Bangkok, Thailand, each day for 8 days in January 2016.

Daily High Temperature in Bangkok

Date	High temperature (°C)
January 17	35
January 18	34
January 19	32
January 20	35
January 21	32
January 22	34
January 23	34
January 24	28

On January 25, the high temperature was 21°C. If this new data point is added to the data set, which of the following statements best describes the impact to the mean and median of the data set?

A) Both the mean and the median would decrease.

B) The mean would stay the same and the median would decrease.

C) The mean would decrease and the median would stay the same.

D) Both the mean and the median would stay the same.

20

A small garden pond is stocked with three colors of Bekko, a variety of koi fish. The table shows the distribution of the color and sex of the Bekko in the pond.

	Sex		
Color	Female	Male	Total
Red	5	5	10
White	12	8	20
Yellow	8	7	15
Total	25	20	45

If a male fish is selected at random from the pond, what is the probability that the fish is yellow?

A) 0.16

B) 0.33

C) 0.35

D) 0.47

21

$$5x + 2y = 20$$
$$15x + ay = 80$$

In the system of equations shown, a is a constant. If the system has no solution, what is the value of a ?

A) 2

B) 5

C) 6

D) 20

22

The amount of fermium-253 in a sample is reduced by half every 3 days because of radioactive decay. If there is an original mass M_0, in milligrams, of fermium-253 in the sample, which of the following equations gives the mass, M, in milligrams of fermium-253 that remains after t days?

A) $M = M_0\left(\frac{1}{3}\right)^{2t}$

B) $M = M_0\left(\frac{1}{3}\right)^{\frac{t}{2}}$

C) $M = M_0\left(\frac{1}{2}\right)^{3t}$

D) $M = M_0\left(\frac{1}{2}\right)^{\frac{t}{3}}$

23

In the xy-plane, line k has a slope of 3 and contains the point $(2, 0)$. Which of the following is an equation of line k ?

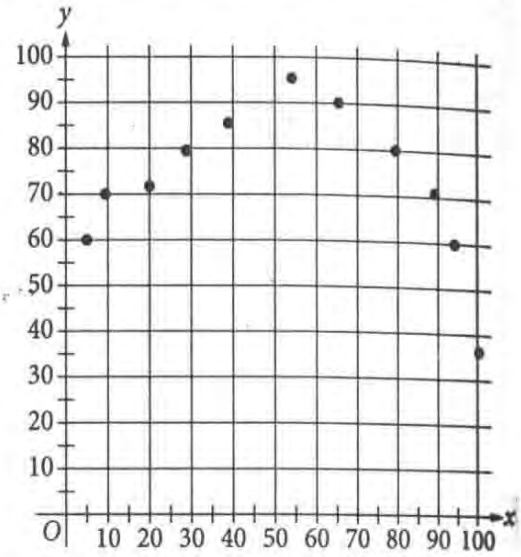
A) $3x - y = 6$

B) $3x + y = 6$

C) $3x - y = -6$

D) $3x + y = -6$

21



Which of the following quadratic equations **best** models the data shown in the scatterplot?

A) $y = -0.018(x + 50)^2 + 92$

B) $y = -0.018(x - 50)^2 + 92$

C) $y = 0.018(x + 50)^2 + 92$

D) $y = 0.018(x - 50)^2 + 92$

25

Which of the following CANNOT be the probability of an event?

A) 0.0

B) 0.5

C) 1.0

D) 1.2

26

A surveyor measured and recorded the heights above sea level of 15 locations. It was later discovered that the equipment had measured all heights 6 feet too low. The surveyor corrected the error by adding 6 feet to each of the 15 measurements. Of the following statistics, which changed when the original 15 measurements were replaced with the corrected data?

I. The average (arithmetic mean)

II. The median

III. The range

A) I only

B) I and II only

C) I and III only

D) I, II, and III

27

The temperature of a cup of cocoa t minutes after it is made is given by the function $C(t) = a + b(0.95)^t$, where a is the temperature of the room, in degrees Celsius, and $a + b$ is the initial temperature of the cocoa, in degrees Celsius. If the cocoa is initially 80°C and the temperature of the room is 20°C, what will the temperature of the cocoa be 2 minutes later, rounded to the nearest degree Celsius?

A) 72°C

B) 74°C

C) 78°C

D) 90°C

28

There is exactly one real value of x that satisfies the quadratic equation $x^2 - 3x + c = 0$. What is the value of c ?

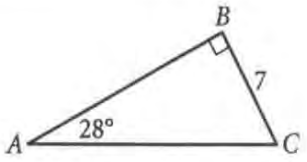
A) $-\frac{4}{9}$

B) $\frac{4}{9}$

C) $\frac{3}{2}$

D) $\frac{9}{4}$

29



What is the area of triangle ABC above?

A) $\frac{49}{2\tan 28°}$

B) $\frac{49}{2\sin 28°}$

C) $\frac{49\tan 28°}{2}$

D) $\frac{49\sin 28°}{2}$

30

$$x^2 - 10x + y^2 - 8y + 16 = 0$$

In the xy-plane, the graph of the equation above is a circle. What is the radius of the circle?

A) 4

B) 5

C) 8

D) 16

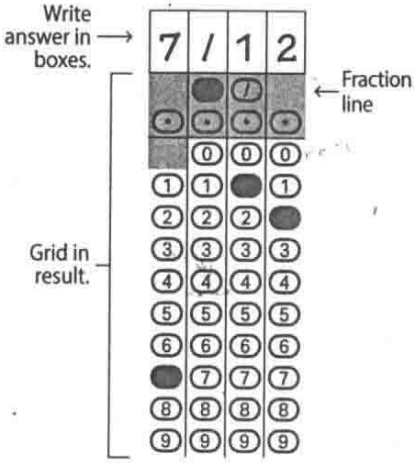
4

DIRECTIONS

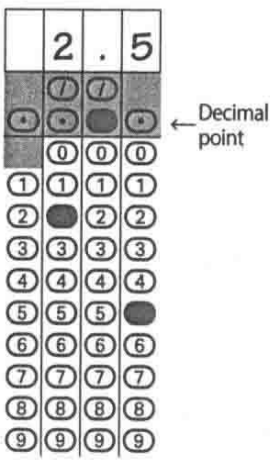
For questions 31-38, solve the problem and enter your answer in the grid, as described below, on the answer sheet.

1. 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 bubbles accurately. You will receive credit only if the bubbles are filled in correctly.
2. Mark no more than one bubble in any column.
3. No question has a negative answer.
4. Some problems may have more than one correct answer. In such cases, grid only one answer.
5. **Mixed numbers** such as $3\frac{1}{2}$ must be gridded as 3.5 or 7/2. (If  is entered into the grid, it will be interpreted as $\frac{31}{2}$, not $3\frac{1}{2}$.)
6. **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.

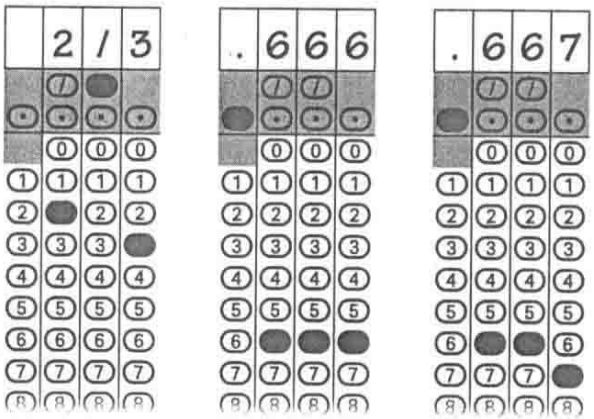
Answer: $\frac{7}{12}$



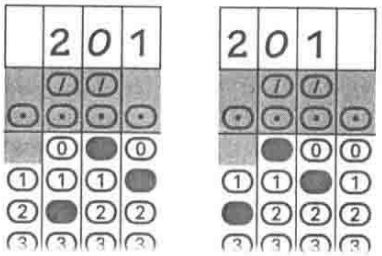
Answer: 2.5



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



Answer: 201 – either position is correct



NOTE:
You may start your answers in any column, space permitting. Columns you don't need to use should be left blank.

31

$$\frac{1}{3}x = 50$$

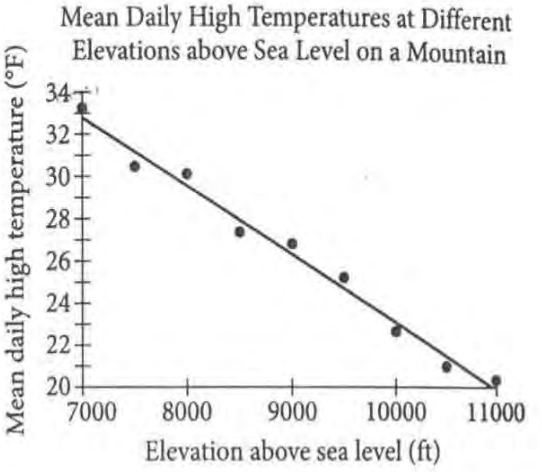
What value of x satisfies the given equation?

32

What number of days is equivalent to 15,840 minutes?

33

The scatterplot shows the mean daily high temperature, in degrees Fahrenheit (°F), and the elevation above sea level, in feet (ft), for each of 9 different locations on a mountain. A line of best fit is also shown.



How many of the 9 elevations have a mean daily high temperature, in °F, less than the mean daily high temperature predicted by the line of best fit?

34

$$(x + 9)(x - 2) = 4(x + 9)$$

What positive value of x satisfies the given equation?

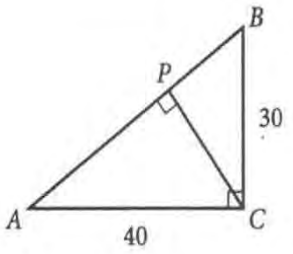
$$2x + 5y = 5.5$$
$$-2x - 4y = 10$$

If (x, y) is the solution to the system of equations above, what is the value of y ?

$$5x^2(4x + 9) = ax^3 + bx^2$$

In the equation above, a and b are constants. If the equation is true for all values of x, what is the value of $a + b$?

The length of segment AB is 150% of the length of segment AC. Segment AC has length k, and the length of segment AB is n times the length of segment AC. What is the value of n ?



In the figure above, point P lies on the hypotenuse of right triangle ABC. What is the length of line segment PB ?

STOP

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section.

1. C
2. D
3. A
4. B
5. C
6. C
7. C
8. A
9. B
10. D
11. B
12. A
13. D
14. C
15. A
16. B
17. B
18. D
19. A
20. A
21. A
22. D
23. B
24. C
25. D
26. C
27. A
28. A
29. A
30. C
31. A
32. B
33. C
34. B
35. C
36. D
37. A
38. D
39. A
40. D
41. C
42. B
43. D
44. A

Commented [MOU2]: OCTOBER 5TH INTERNATIONAL READING KEY

45. C
46. A
47. C
48. B
49. A
50. C
51. C
52. A

1. A
2. D
3. D
4. C
5. D
6. B
7. D
8. B
9. A
10. C
11. B
12. D
13. D
14. C
15. D
16. A
17. B
18. C
19. A
20. A
21. B
22. C
23. D
24. B
25. B
26. C
27. D
28. D
29. B
30. B
31. A
32. C
33. D
34. C
35. C
36. B
37. A
38. A
39. B
40. D
41. D
42. C
43. A
44. A

Commented [MOU1]: WRITING KEY OCTOBER 5TH INTERNATIONAL

MATH NO CALC
OCTOBER 5TH
INTERNATIONAL

1. C
2. A
3. C
4. C
5. B
6. B
7. D
8. B
9. A
10. D
11. B
12. C
13. A
14. D
15. A
16. ¼
17. 4
18. 3
19. 100
20. 5

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1) C
2) A
3) B
4) D
5) A
6) B
7) B
8) A
9) C
10) D
11) C
12) C
13) B
14) A
15) B
16) C
17) D
18) A
19) D
20) C
21) C
22) D
23) A
24) B

CALCULATOR MATH OCTOBER 5TH
INTERNATIONAL

25) D
26) B
27) B
28) D
29) A
30) B
31) 150
32) 11
33) 4
34) 6
35) 15.5
36) 65
37) 1.5
38) 18