The reception of Many Ly's book *Roots and Wings* has been very good. Many reviewers, booksellers, and librarians have _____ the book, and it won the Asian/Pacific American Award for Literature.

1 Mark for Review

Which choice completes the text with the most logical and precise word or phrase?

(A) attacked

(B) recommended

(C) overlooked

(D) misunderstood

Highest scoring service @JohannesKP

The following text is adapted from Mary Seacole's 1857 autobiography *Wonderful Adventures of Mrs. Seacole in Many Lands*.

That journey across the Isthmus [of Panama], insignificant in distance as it was, was by no means an easy one. It seemed as if nature had determined to throw every conceivable obstacle in the way of those who should seek to join the two great oceans of the world.

2 Mark for Review

As used in the text, what does the word "conceivable" most nearly mean?

(A) Visible

(B) Steady

(C) Easy

(D) Possible

Highest scoring service @JohannesKP

Kelp forests grow underwater along the eastern Pacific Coast. These underwater forests are important to fish and other marine animals. Ocean currents can be powerful and rough, making it difficult for animals to find safe places to hide from predators. The underwater forests slow down the currents. This creates a more _____ environment with calmer waters where animals can take shelter.

3 Mark for Review

Which choice completes the text with the most logical and precise word or phrase?

(A) surprising

(B) dangerous

(C) tranquil

(D) imaginative

Highest scoring service @JohannesKP

The recently observed gamma ray burst GRB 230307A lasted for 200 seconds, for a burst generated by the merger of neutron stars. Bursts caused by neutron mergers typically last fewer than 2 seconds.

4 Mark for Review

Which choice completes the text with the most logical and precise word or phrase?

(A) an oddity

(B) a coincidence

(C) a reprieve

(D) an incident

Highest scoring service @JohannesKP

Pteropods are small swimming snails with thin, delicate calcium carbonate shells. These animals are thought to be especially vulnerable to ocean acidification due to calcium carbonate's susceptibility to dissolution at lower pH values. Victoria L. Peck and colleagues recently found that the periostracum (a protective coating on pteropods' outer shells) prevents this dissolution when intact. Moreover, the team was surprised to discover that even when the periostracum is breached, pteropods can still mitigate damage by rebuilding the inner shell wall.

5 Mark for Review

Which choice best describes the main purpose of the text?

(A) To call for additional research on biological mechanisms that improve pteropod survival rates

(B) To present findings that suggest that a concern about the effects of ocean acidification on pteropod shells may be unwarranted

(C) To address some of the ways ocean acidification has altered pteropod behavior over time

(D) To discuss a conclusion drawn in a study of calcium carbonate's role in protecting the periostracum of pteropods

@JohannesKP Highest scoring service

San Francisco has high pedestrian traffic, but simply replicating a feature of San Francisco associated with walkability—e.g., its high density of storefronts—may be insufficient to induce increased walking in other cities. As urbanist Mariela Alfonzo argues, our understanding of individuals' decision-making about whether to walk is insufficiently robust: some studies emphasize the role of demographic characteristics, others the role of public transit availability, and so on, but walking decisions are made in complex contexts in which multiple conditions and needs inform individuals' choices.

6 Mark for Review

Which choice best states the main purpose of the text?

(A) To discuss the difficulty of identifying a reliable way to increase walking in any given city

(B) To explain why it is challenging to compare the amount of pedestrian traffic in different cities

(C) To describe the effect of a high density of storefronts on any given city's walkability

(D) To present a claim about how individuals' decision-making about walking can be improved

@JohannesKP highest scoring service

Guojun He and colleagues studied a food-delivery phone app that is popular in China. The researchers found that having "no cutlery" automatically selected influences whether customers request disposable plastic utensils with their food orders. Based on their results, the researchers concluded that this and other small changes to the app could reduce plastic waste in China by as much as 3.26 million metric tons per year.

7 Mark for Review

According to the text, which choice best describes a conclusion He and colleagues drew from their study?

(A) Production of plastic waste in China is likely to increase in the near future.

(B) Food-delivery apps that prevent customers from requesting cutlery are becoming more popular.

(C) Customers who understand how food-delivery apps work make more environmentally friendly choices.

(D) Small changes to how a food-delivery app works can greatly lower plastic waste.

@JohannesKP

The following text is from William Shakespeare's play *The Tempest*, first performed in 1611. Miranda has lived on an island with her father, Prospero, since she was three years old. Prospero has stated that Miranda likely does not remember anything other than her life on the island.

MIRANDA: 'Tis far off,
And rather like a dream than an assurance
That my remembrance warrants. Had I not
Four or five women once that tended me?

PROSPERO: Thou hadst, and more, Miranda. But how is it
That this lives in thy mind? What seest thou else
In the dark backward and abysm of time?
If thou remember'st ought ere thou camest here,
How thou camest here thou mayst.

8 Mark for Review

In the text, which point does Prospero most directly make about Miranda and her memories?

(A) Miranda's impression of a scene is vague because she is remembering a scenario she had daydreamed about as a child rather than a scenario that had occurred in reality.

(B) Miranda's reminiscences about her early childhood have a melancholy quality that betrays her discontented view of her current circumstances.

(C) Miranda's ability to summon details of an experience she had before arriving on the island suggests that she may also be able to summon details of her arrival on the island.

(D) Miranda's doubts about the accuracy of one recollection of a place other than the island are clouding her judgment and seem to be making her reluctant to explore her recollection of traveling to the island.

Highest scoring service @JohannesKP

Impact of Four Key Industries on Oklahoma Economy in 2017

Industry	Approximate total contribution by industry	Number of people employed by industry	Average contribution per employee by industry
Tribal economic activity	$7,312,400,000	51,674	$141,510
Finance/insurance	$7,281,900,000	56,163	$129,657
Wholesale trade	$10,723,400,000	58,346	$183,790
Administration/waste	$5,830,600,000	96,964	$60,132

The Chickasaw Nation and the nearly forty other tribes in Oklahoma operate numerous businesses and collectively generate billions of dollars in revenue. Mining, including oil and natural gas production, is a key industry in the state as well. While researching other key industries in Oklahoma for an economics class, a student finds that the average amount contributed to the state's economy in 2017 by each individual employed in wholesale trade was _____.

9 Mark for Review

Which choice most effectively uses data from the table to complete the statement?

(A) $141,510.

(B) $56,163.

(C) $183,790.

(D) $96,964.

Highest scoring service @JohannesKP

Minimum and Maximum Depths of Stony Coral Species in Caribbean and Indo-Pacific Waters

Species	Location	Minimum depth (meters)	Maximum depth (meters)
Agaricia grahamae	Caribbean	20	115
Acropora bushyensis	Indo-Pacific	0	5
Mussa angulosa	Caribbean	5	30
Indophyllia macassarensis	Indo-Pacific	20	25

A marine biologist is researching four stony coral species in Caribbean and Indo-Pacific waters, focusing on sightings of these species in the shallow zone (less than 30 meters below the surface) and the mesophotic zone (30 to 150 meters below the surface). Consulting the table, she notes that the smallest maximum depth is located in _____.

10 Mark for Review

Which choice most effectively uses data from the table to complete the statement?

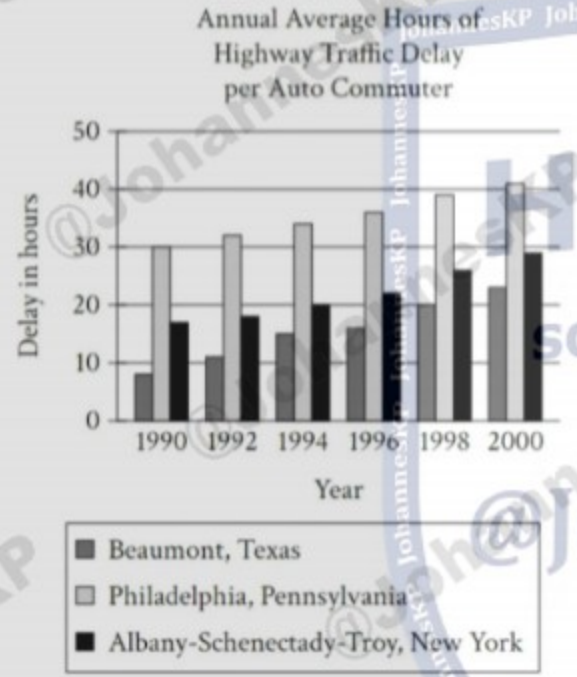
(A) Indo-Pacific waters in the shallow zone.

(B) Caribbean waters in the shallow zone.

(C) Indo-Pacific waters in the mesophotic zone.

(D) Caribbean waters in the mesophotic zone.

JohannesKP @JohannesKP Highest scoring service



In a college course on urban affairs, a student asserts that increased traffic congestion in the United States in the 1990s was present both in very large cities such as Philadelphia, Pennsylvania, and smaller areas such as Albany-Schenectady-Troy, New York, and Beaumont, Texas; though those smaller areas may have been less affected by traffic congestion than very large cities, this congestion also worsened in them over time.

11 Mark for Review

Which choice best describes data from the graph that support the student's claim?

(A) Even though the amount of traffic delay per commuter per year was greater in the Albany-Schenectady-Troy, New York, area than in the Philadelphia, Pennsylvania, area throughout the period from 1990 to 2000, the amounts were nearly identical in 1996.

(B) In 1992, the amount of traffic delay in the Philadelphia, Pennsylvania, area was less than 30 hours per commuter per year.

(C) In at least one of the three urban areas shown, the amount of traffic delay was less than 20 hours per commuter per year at one point between 1990 and 2000.

(D) While the annual number of hours of traffic delay per commuter was always lower in the Albany-Schenectady-Troy, New York, area than in the Philadelphia, Pennsylvania, area for each year between 1990 and 2000, the amount of traffic delay rose in both areas during this period.

Past research suggests that pollination by honeybees is responsible for up to 10 percent of total Chinese cabbage crop production. Now researchers are trying to determine how dependent cucumber crop production is on honeybees. The first phase of their study involved shielding some cucumber plants to prevent insects from pollinating them, resulting in those plants having 40 to 90 percent lower crop production than plants that were pollinated normally. However, the researchers claim that the first-phase experiment alone didn't tell them how much of that difference in crop production is due specifically to excluding honeybees.

12 Mark for Review

Which finding, if true, would most directly support the researchers' claim?

(A) The shielding used in the first phase of the study did not affect the amount of sunlight the cucumber plants received.

(B) Other insects like solitary bees also pollinate Chinese cabbage plants, and some studies have allowed them to pollinate normally while excluding honeybees.

(C) Other insects like squash bees also pollinate cucumber plants, and the shielding in the first phase of the study blocked them as well.

(D) Honeybees are more commonly used to pollinate cucumber plants than Chinese cabbage plants.

@JohannesKP Highest Scoring service

The glossy ibis and the small dark heron are long-legged birds that live in wetlands, like the Everglades in Florida. Laura D'Acunto and colleagues wanted to know how these birds choose an area in which to live. They looked at features of the birds' habitats, such as the geographic location of the area and how deep the water is during the birds' breeding season. They found that glossy ibises prefer areas with deep water during breeding season, but that was not true for small dark herons. The researchers concluded that water management strategies that increase the depth of water in potential wetland bird habitats during breeding season are therefore more likely to _____

13 Mark for Review

Which choice most logically completes the text?

(A) attract glossy ibises to the area than they are to attract small dark herons to the area.

(B) attract birds that don't typically live in wetlands to the area than they are to attract glossy ibises or small dark herons to the area.

(C) extend the average lifespan of glossy ibises already in the area than they are to attract a greater number of those birds to the area.

(D) decrease the area's appeal to both glossy ibises and small dark herons than they are to increase the appeal to either.

Highest scoring service @JohannesKP

Scientists recently created a model to predict how increasing human activity will affect future mammal population sizes in US national forests. Unfortunately, when the model is applied to large forests, its predictions for large-mammal populations are too high, and when applied to small forests, its predictions for small-mammal populations are too high. Beaverhead-Deerlodge National Forest in Montana is a large forest, covering more than 3 million acres. If used to evaluate the effect of increasing human activity on this forest in ten years, the model would likely therefore _____

14 Mark for Review

Which choice most logically completes the text?

(A) exaggerate the effect of increasing human activity on small mammals.

(B) overestimate the actual population sizes of large mammals.

(C) ignore the predator-prey relationships between large and small mammals.

(D) reflect factors affecting large mammals other than increasing human activity.

Highest scoring service @JohannesKP

In 1989, Missouri _____ official fossil: the *Eperisocrinus missouriensis*, which is a Carboniferous period marine animal.

15 Mark for Review

Which choice completes the text so that it conforms to the conventions of Standard English?

(A) lawmaker's designated the states

(B) lawmakers designated the state's

(C) lawmaker's designated the state's

(D) lawmakers designated the states

Highest scoring service
@JohannesKP

Often anthologized alongside the _____ associated with the Black Arts movement—such as Henry Dumas and Ntozake Shange—Haki Madhubuti's poem "Quality: Gwendolyn Brooks at 73" stands out for its memorable first lines: "breath, / life after seven decades plus three years / is a lot of breathing."

16 Mark for Review

Which choice completes the text so that it conforms to the conventions of Standard English?

(A) works of other writer's

(B) work's of other writer's

(C) works of other writers

(D) work's of other writers

Highest scoring service
@JohannesKP

The part of a compound that determines the compound's color is _____ the chromophore. One example of a chromophore is hemoglobin, which gives human blood its red color.

17 Mark for Review

Which choice completes the text so that it conforms to the conventions of Standard English?

(A) called—

(B) called;

(C) called,

(D) called

Highest scoring service @JohannesKP

Released in 1993, the Intel Pentium microchip contained a single CPU, or core, to execute commands. Since then, the average processing power of microchips has increased so drastically—cores now number in the dozens, hundreds, or even _____ the once-revolutionary dual-core technology that replaced the single-core chip can be found in everyday items like toasters and toothbrushes.

18 Mark for Review

Which choice completes the text so that it conforms to the conventions of Standard English?

(A) thousands—that

(B) thousands that—

(C) thousands. That

(D) thousands, that

@JohannesKP

After finding information about Ronald V. Dellums, who represented California in the United States House of Representatives, the student discovered biographical sketches of two other Black Americans who served in _____ Ralph Harold Metcalfe of Illinois and George Henry White of North Carolina.

19 Mark for Review

Which choice completes the text so that it conforms to the conventions of Standard English?

(A) Congress.

(B) Congress:

(C) Congress;

(D) Congress

Highest scoring service @JohannesKP

When a given industry—water and electricity are two well-known examples—carries high infrastructural start-up costs and other barriers that discourage competition, _____ of just one or two suppliers per municipality. Such industries are known as natural monopolies.

20 Mark for Review

Which choice completes the text so that it conforms to the conventions of Standard English?

(A) they often consist

(B) this often consists

(C) these often consist

(D) it often consists

highest scoring service @JohannesKP

Cornelia Konrads is a German sculptor who creates art that seems to be part of its surroundings. Her sculpture entitled *knotty stilts* is built on the wall of a university building in the United States _____ appearing as two support beams knotted together against the wall, it is cleverly placed into its environment, serving as an example of Konrads's approach.

21 Mark for Review

Which choice completes the text with the most logical transition?

(A) There,

(B) Later,

(C) For instance,

(D) However,

Highest scoring service
@JohannesKP

There are three basic steps you should follow when planning a scientific inquiry. First, thoroughly research the question you wish to answer _____ come up with a prediction (also called a hypothesis) about the answer to your question. Third, develop an experiment that can test the accuracy of your hypothesis.

22 Mark for Review

Which choice completes the text with the most logical transition?

(A) For example,

(B) Second,

(C) Therefore,

(D) Instead,

Highest scoring service @JohannesKP

While researching a topic, a student has taken the following notes:

- Atitalaquía is a municipality in the state of Hidalgo, Mexico.
- Municipalities are governmental regions responsible for providing many public services to their residents.
- One service they provide is street lighting.
- Atitalaquía covers an area of roughly 63 km².
- Hidalgo is divided into 84 municipalities.

24 Mark for Review

The student wants to emphasize the size of Atitalaquía. Which choice most effectively uses relevant information from the notes to accomplish this goal?

(A) Providing street lighting is just one example of the public services that municipalities provide.

(B) Atitalaquía is one of 84 governmental regions, known as municipalities, across Hidalgo.

(C) Atitalaquía—a governmental region in the state of Hidalgo, Mexico—provides many public services to its residents.

(D) The municipality of Atitalaquía in Hidalgo, Mexico, covers an area of roughly 63 km².

JohannesKP JohannesKP JohannesKP JohannesKP
Highest scoring service
@JohannesKP

While researching a topic, a student has taken the following notes:

- *The Future of Nostalgia* is a scholarly book by literary theorist Svetlana Boym.
- The book provides a multifaceted exploration of the concept of nostalgia.
- Chapter 9 describes nostalgia in the city of St. Petersburg in Russia.
- Chapter 17 discusses various skeptics' takes on the concept of nostalgia.
- In chapter 17, Boym writes, "The poethics of nostalgia combines estrangement and human solidarity, affect and reflection."

25 Mark for Review

The student wants to provide a quotation from chapter 17. Which choice most effectively uses relevant information from the notes to accomplish this goal?

(A) In a discussion of various skeptics' takes on the concept of nostalgia, Svetlana Boym writes, "The poethics of nostalgia combines estrangement and human solidarity, affect and reflection."

(B) Svetlana Boym's *The Future of Nostalgia* provides a multifaceted exploration of nostalgia.

(C) Svetlana Boym describes nostalgia in the city of St. Petersburg in Russia in chapter 9 of her book.

(D) After describing nostalgia in the city of St. Petersburg in Russia, Svetlana Boym goes on to discuss various skeptics' takes on the concept of nostalgia.

Highest scoring service @JohannesKP

- Jean-Michel Basquiat was an American artist who produced more than two thousand drawings and paintings.
- His work *Untitled (Two Heads on Gold)* was completed in 1982 and sold at auction in 2003.
- *Untitled (Two Heads on Gold)* is composed of acrylic and oil stick on canvas and measures 10,000 square inches in area.
- His work *Jazz* was completed in 1986 and sold at auction in 2020.
- *Jazz* is composed of acrylic, oil, graphite, crayon, and paper collage on wood and measures 1,807 square inches in area.

26 Mark for Review

Which choice most effectively uses information from the given sentences to emphasize how the two works are similar?

(A) Artist Jean-Michel Basquiat completed *Untitled (Two Heads on Gold)* in 1982, and *Jazz* followed in 1986.

(B) Between artist Jean-Michel Basquiat's works *Untitled (Two Heads on Gold)* and *Jazz*, the former is the larger of the two.

(C) Composed by artist Jean-Michel Basquiat in 1982 and 1986, respectively, both *Untitled (Two Heads on Gold)* and *Jazz* use acrylic paint as a medium.

(D) Artist Jean-Michel Basquiat's work *Untitled (Two Heads on Gold)* is composed of acrylic and oil stick, while *Jazz* is composed of acrylic, oil, graphite, crayon, and paper collage.

Highest scoring service @JohannesKP

While researching a topic, a student has taken the following notes:

- Onomatopoeias are words that imitate the sounds they represent.
- Words that represent the same sound are often written and pronounced very differently from language to language.
- This variation is due in part to differences in how the languages are structured.
- "Korrrr" is a Batak onomatopoeia that represents the sound of snoring.
- "Hū lu" is a Mandarin Chinese onomatopoeia that represents the sound of snoring.

27 Mark for Review

The student wants to contrast two words that represent the same sound. Which choice most effectively uses relevant information from the notes to accomplish this goal?

(A) Though they both represent the sound of snoring, the onomatopoeias "korrrr" (Batak) and "hū lu" (Mandarin Chinese) are written and pronounced very differently.

(B) Onomatopoeias, words that imitate the sounds they represent, are often written and pronounced very differently from language to language.

(C) The Batak word "korrrr" and the Mandarin Chinese word "hū lu" are onomatopoeias that represent the sound of snoring.

(D) The Batak word "korrrr," which represents the sound of snoring, is an onomatopoeia.

JohannesKP JohannesKP JohannesKP JohannesKP
Highest scoring service
@JohannesKP

Smartphones and other small electronic devices tend to use batteries that can't be easily taken out and swapped for new ones. Environmental policy researcher Jean-Pierre Schweitzer warns that when these internal batteries stop working, the devices are usually thrown away, becoming harmful _____.

1 Mark for Review

Which choice completes the text with the most logical and precise word or phrase?

(A) advice

(B) waste

(C) rewards

(D) positions

@JohannesKP
Highest scoring service

The following text is adapted from Kenneth Grahame's 1908 novel *The Wind in the Willows*. The Mole has been found by a friend after getting lost in the woods. It is beginning to snow.

> The Mole saw the wood that had been so dreadful to him in quite a changed aspect. Holes, hollows, pools, pitfalls, and other menaces to the wayfarer were vanishing fast, and a gleaming carpet was springing up everywhere, that looked too delicate to be trodden upon by rough feet.

2 Mark for Review

As used in the text, what does the word "delicate" most nearly mean?

(A) Generous
(B) Fragile
(C) Accurate
(D) Empty

JohannesKP Johannes Johannes scoring service @JohannesKP

Jean Batten, who was the first person to fly between England and New Zealand solo, and Ynes Mexia, who was the first to discover the botanical genus Mexianthus, are ensured lasting places in our historical memory. No matter what others may do in the future, nobody can ever _____ the standing of these women as the first to accomplish these feats.

3 Mark for Review

Which choice completes the text with the most logical and precise word or phrase?

(A) undermine

(B) imply

(C) extend

(D) promote

JohannesKP JohannesKP JohannesKP
Highest scoring service
@JohannesKP

Whatever the general attitude toward Madeline Anderson's 1970 film *I Am Somebody* and Reginald Hudlin's 1990 film *House Party* when they were initially released, both films now tend to be regarded quite _____. In 2018, for example, critics for the *New York Times* praised the former as "galvanizing" and the latter as "exuberant."

4 Mark for Review

Which choice completes the text with the most logical and precise word or phrase?

(A) favorably

(B) skeptically

(C) neutrally

(D) strangely

JohannesKP JohannesKP JohannesKP
Highest scoring service
@JohannesKP

To evaluate their ideas about environmental conditions in the Pliocene epoch, paleontologists must turn to _____ evidence. Only material objects—such as the fossil remains of the individual known as AL 200-1, discovered in Ethiopia in 1975—can show whether a particular idea about the Pliocene is defensible.

5 Mark for Review

Which choice completes the text with the most logical and precise word or phrase?

(A) physical

(B) convenient

(C) creative

(D) inconclusive

JohannesKP JohannesKP Johannes
Highest scoring service
@JohannesKP
JohannesKP

Joseph A. Walker's award-winning play *The River Niger* was produced in 1972 by the groundbreaking Negro Ensemble Company (NEC). NEC cofounder Douglas Turner Ward, who worked as an actor, director, and playwright, had met actor and producer Robert Hooks while they were performing in a 1960 touring production of Lorraine Hansberry's play *A Raisin in the Sun*. Together, they envisioned a theater company that would nurture and showcase the work of Black theater professionals. Since NEC's founding in 1967, its workshops and performances have given Black playwrights, including Walker, a forum for their compelling stories.

6 Mark for Review

Which choice best describes the function of the underlined portion in the text as a whole?

(A) It illustrates the importance of an organization mentioned in the text.

(B) It compares the achievements of two people discussed later in the text.

(C) It argues against the claim made earlier in the text.

(D) It provides additional information about a person discussed in the text.

JohannesKP JohannesKP JohannesKP
scoring service
@JohannesKP

Burt Kotler and colleagues showed that high moonlight intensity inhibits the activity of the greater Egyptian gerbil (*Gerbillus pyramidum*), a finding explicable in terms of benefits and costs: greater lunar intensity may not enable the gerbils to increase foraging success enough to offset the higher chance of detection by predatory foxes or owls. Though many other nocturnal mammals respond to lunar intensity variations similarly to greater Egyptian gerbils, Mohol bushbabies (*Galago moholi*) display the opposite pattern, as their heavy reliance on visual foraging results in a different balance of reward and risk.

7 Mark for Review

Which choice best describes the function of the reference to "heavy reliance on visual foraging" in the text as a whole?

(A) It emphasizes an attribute of Mohol bushbabies that enables them to respond to lunar intensity variations more rapidly than greater Egyptian gerbils and many other nocturnal mammals do.

(B) It identifies a characteristic of Mohol bushbabies that explains why they do not reduce their activity under high lunar intensity like greater Egyptian gerbils and many other nocturnal mammals do.

(C) It describes a behavioral pattern displayed by Mohol bushbabies that is inconsistent with how they would be expected to respond to high lunar intensity based on benefits and costs.

(D) It presents a trait of Mohol bushbabies that serves as evidence for the assertion that greater Egyptian gerbils are not the only nocturnal mammals whose activity is inhibited by high lunar intensity.

JohannesKP JohannesKP Johannes
scoring service
@JohannesKP

Text 1

Isaac Asimov, author of *The Caves of Steel* and *The Stars, Like Dust*, is highly regarded despite his mediocre writing style. His prose is workmanlike; his characters are flat and discuss ideas rather than emotions. That his work is enjoyable despite this is a testament to his prodigious imagination—even if people read his books only for the ideas, they will have plenty to consider.

Text 2

Asimov is critiqued for his style, but it is wrong to fault a writer for failing to do what he never intended to do. For example, although most of his novel *Foundation* consists of people discussing science and politics and we find out little about his characters' lives, Asimov wanted to convey the vast sweep of human history over centuries, and one of his points is that at such a timescale, individuals don't matter. Thus his lack of characterization is central to his thematic aims.

8 Mark for Review

Based on the texts, how would the author of Text 2 most likely respond to the description of Asimov's characters in the underlined portion of Text 1?

(A) Asimov's characterizations would have been richer if he had possessed a deeper understanding of history.

(B) The flatness of Asimov's characters is a feature of *The Caves of Steel* and *The Stars, Like Dust* but not of *Foundation*.

(C) The flatness of Asimov's characters should not necessarily be considered a flaw in his writing.

(D) Asimov's characterizations would have been more believable if his writing had discussed fewer ideas.

JohannesKP JohannesKP JohannesKP
scoring service
@JohannesKP

Animals use many objects as tools to achieve goals more easily. Such goals include grooming, finding food, and protecting themselves. For a long time, people thought tool use was unique to primates. Sea otters and other animals, though, have busted the myth that tool use is limited to certain primates. Inventively, sea otters use stationary anvil stones to break open mollusk shells. Woodpecker finches also get creative. They use cactus spines to pry insects from hiding places.

9 Mark for Review

Which choice best states the main idea of the text?

(A) Animals find it difficult to use objects as tools.

(B) Unlike primates, sea otters are exceptionally skillful at using different tools.

(C) Contrary to long-held beliefs, primates aren't the only animals to use tools.

(D) There are many myths about tool use that researchers are starting to challenge.

JohannesKP JohannesKP JohannesKP
Highest scoring service
@JohannesKP

Home Video Games and Computer Games of the 1980s

Title	Approximate number of units sold worldwide	Release year	Genre	Developer
Excitebike	4,160,000	1984	racing	Nintendo R&D1
The Last Ninja 2	5,500,000	1988	action-adventure	System 3
Zelda II: The Adventure of Link	4,380,000	1987	action-adventure	Nintendo EAD
Frogger	4,100,000	1982	action	Konami

A student is writing a paper on the global rise of the home video game industry during the 1980s. The student wants to know the release year of the video game *Zelda II: The Adventure of Link*, developed by Nintendo EAD. The student finds that this game was released in _____

10 Mark for Review

Which choice most effectively uses data from the table to complete the statement?

(A) 1982.

(B) 1987.

(C) 1984.

(D) 1988.

A film studies student is researching early 20th-century film serials, which consisted of individual episodes of a single long story that were shown weekly in theaters. *Clancy of the Mounted* is a 1933 serial that, over its 12 episodes, kept its audience interested with the suspense and drama that are typical of the northern adventure genre. The student, however, claims that ultimately audiences of the time preferred resolution and closure over ongoing tension.

11 Mark for Review

Which finding, if true, would most directly support the student's claim?

(A) The 12th episode of *Clancy of the Mounted* was the most expensive episode of the series to produce.

(B) The 12th episode of *Clancy of the Mounted* was viewed by more people than was any previous episode in the series.

(C) Modern critics generally regard the first episode as the best installment of *Clancy of the Mounted*.

(D) Audiences of the time considered *Clancy of the Mounted* to belong to a genre other than the northern adventure genre.

JohannesKP
@JohannesKP
highest scoring service

Treasure Island is an 1883 novel by Robert Louis Stevenson. When the narrator was a child, his father ran a hotel. A mysterious sailor came to stay at the hotel. The narrator was frightened of the sailor, as can be seen when the narrator says, _____

12 Mark for Review

Which quotation from *Treasure Island* most effectively illustrates the claim?

(A) "How [the sailor] haunted my dreams, I need scarcely tell you. On stormy nights, when the wind shook the four corners of the house and the surf roared along the cove and up the cliffs, I would see him in a thousand forms, and with a thousand diabolical expressions."

(B) "I remember [the sailor] as if it were yesterday, as he came plodding to the inn door, his sea-chest following behind him in a hand-barrow."

(C) "[The sailor] was a very silent man by custom. All day he hung round the cove or upon the cliffs with a brass telescope."

(D) "All the time he lived with us [the sailor] made no change whatever in his dress but to buy some stockings from a hawker. One of the [corners] of his hat having fallen down, he let it hang from that day forth, though it was a great annoyance when it blew."

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Highest scoring service
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Students in a biology class investigated why individual house mice (*Mus musculus*) can differ from one another in their susceptibility to cataracts in old age. The students compared wild-type mice and knockout mice, which are mice with specific genes deactivated, when mice of each type were raised in similar naturalistic environments and periodically tested for cataracts. Finding that knockout mice with the gene *Aasdh* deactivated tended to develop cataracts more frequently than did wild-type mice, the students concluded that differences in cataract frequency among house mice in nature are solely attributable to variations in the level of expression of *Aasdh*.

13 Mark for Review

Which finding, if true, would most directly weaken the students' conclusion?

(A) Some wild-type mice were very similar to the knockout mice with regard to cataract frequency but showed a wide variety of levels of expression of *Aasdh*.

(B) The level of expression of *Aasdh* does not appear to affect the functioning of any other genes in house mice.

(C) A sampling of house mice captured in natural settings shows that individual mice can differ from one another in the level of expression of *Aasdh*.

(D) The mice with *Aasdh* deactivated were identical to the wild-type mice except with regard to cataract frequency.

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Narwhals are shy whales that live in the remote Arctic Ocean. Some of them have a long tusk, like a unicorn horn, with sensitive nerves. Narwhals are known for this tusk, but many actually don't have one and its purpose is unknown. One group of scientists came up with a possible purpose in 2014. The scientists suggested that the tusk may help narwhals determine when water around them is likely to start freezing and become dangerous for them. Marine biologist Kristin Laidre disagrees with that idea, though. She reasons that if the narwhal's tusk serves such an important purpose, then it's most likely that _____

14 Mark for Review

Which choice most logically completes the text?

(A) some narwhals would seek a new habitat.

(B) more narwhals would have a tusk.

(C) fewer marine animals would also have tusks.

(D) narwhals would become less shy over time.

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Over 600 languages are spoken in New York City in addition to English—one can find Bartangi spoken in the neighborhood of Yorkville, or Ghale in Jackson Heights. Most speakers of Chinese languages reside in the neighborhood of Flushing (part of New York City's borough of Queens) and in Chinatown, in the borough of Manhattan. New immigrants from north China, where Mandarin is the primary first language, tend to settle in Queens, while new immigrants from south China, where many people speak Cantonese or Fuzhounese as a first language, tend to settle in Manhattan. It can therefore be inferred that _____

15 Mark for Review

Which choice most logically completes the text?

(A) languages tend to change more rapidly in areas where many languages are spoken than in areas where few languages are spoken.

(B) correlations in a country between languages and regions where they are spoken can replicate themselves in a new country to which the original country's citizens emigrate.

(C) languages spoken by immigrant peoples can differ significantly in vocabulary and pronunciation from those same languages in their country of origin.

(D) there is a positive correlation between the physical size of a country and the number of languages spoken in that country.

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F. Scott Fitzgerald's 1920 novel *This Side of Paradise* contains elements drawn from Fitzgerald's own life—there are many parallels between the experiences of the novel's protagonist, Amory Blaine, and those of Fitzgerald—and as a result *This Side of Paradise* is regularly described as an autobiographical novel. This characterization can be useful, but it also presents drawbacks in terms of how the work is perceived, as it may lead readers to believe that Fitzgerald merely fictionalized true events, which, in an artistic field where creativity and inventiveness are prized, can suggest that _____.

16 Mark for Review

Which choice most logically completes the text?

(A) *This Side of Paradise* is less of an imaginative achievement than it actually is.

(B) Fitzgerald should not have claimed that *This Side of Paradise* is based on real events.

(C) critics disagree about whether *This Side of Paradise* shows greater originality than works without autobiographical elements.

(D) the real-world counterparts of other characters in *This Side of Paradise* are hard to identify.

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Completed in 1886, Vincent van Gogh's drawing *Behind the Hedge* is less well known than his _____ it is still considered by scholars to be an important work.

17 Mark for Review

Which choice completes the text so that it conforms to the conventions of Standard English?

(A) paintings, but

(B) paintings,

(C) paintings

(D) paintings but

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On the other hand, Kansas City International Airport, which _____ located in Kansas City, Missouri, saw an overall increase in departing passengers over the same time period, from 4,891,704 total passengers to 5,759,138.

18 Mark for Review

Which choice completes the text so that it conforms to the conventions of Standard English?

(A) is

(B) are

(C) were

(D) have been

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When Anglo and African Americans moved West in the nineteenth century to begin cattle ranching, they learned the trade from Spanish-speaking Mexican *vaqueros* (cowboys). This is why many ranching terms come from _____ English word "lasso" (a rope) comes from the Spanish word *lazo*, and "cinch" (a belt) comes from *cincho*.

19 Mark for Review

Which choice completes the text so that it conforms to the conventions of Standard English?

(A) Spanish. The

(B) Spanish (the

(C) Spanish the

(D) Spanish? The

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JohannesKP JohannesKP JohannesKP

The fact that many even-toed ungulates, including the Bawean deer (*Axis kuhlii*) and the south Andean deer (*Hippocamelus bisulcus*), meet the population criteria for endangered status validates the need for interventions that can prevent _____ from joining the ranks of the extinct.

20 Mark for Review

Which choice completes the text so that it conforms to the conventions of Standard English?

(A) the animal

(B) these animals

(C) this animal's

(D) these animals'

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Water boils at around 212°F at sea level, but in Questa, New Mexico (elevation: 7,461 feet above sea level), it boils at around 198°F. Food writer J. Kenji López-Alt, who explores the science behind cooking, _____ that lower boiling points at higher elevations "can wreak all sorts of havoc on recipes."

21 Mark for Review

Which choice completes the text so that it conforms to the conventions of Standard English?

(A) explains

(B) are explaining

(C) explain

(D) have explained

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While not the case with dimples, some inherited observable traits, or phenotypes, can change because of a variety of factors. _____ eye color can change because of age.

22 Mark for Review

Which choice completes the text with the most logical transition?

(A) For example,

(B) Finally,

(C) Conversely,

(D) In any case,

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Just as the state of New York has a designated state flower, tree, and bird, it also has a state soil: Honeoye soil. Honeoye is a fitting choice for state soil, in large part because it can be found in abundance across the state. _____ it plays an important role in New York's agricultural industry and is used to grow a variety of crops, like corn and soybeans.

23 Mark for Review

Which choice completes the text with the most logical transition?

(A) At that time,

(B) Alternatively,

(C) Conversely,

(D) Moreover,

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Roughly once an hour, a torrent of boiling water shoots up 100 feet or more from Yellowstone's Old Faithful geyser before plunging back to the surface—a cycle seemingly inhospitable to life. _____ as microbiologist Eric Boyd attests, "the geyser is...almost like a cradle for biodiversity," home to numerous bacteria species that thrive in its sulfurous waters.

24 Mark for Review

Which choice completes the text with the most logical transition?

(A) Thus,

(B) Still,

(C) Specifically,

(D) In other words,

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- Impact craters occur when a large object collides with Earth at high speeds.
- Examples of such objects include comets and meteorites.
- Newporte is an impact crater in the United States.
- Researchers have determined that it was formed less than 500 million years ago.
- The crater has a diameter of approximately 3.2 km.

25 Mark for Review

Which choice most effectively uses information from the given sentences to emphasiz
size of the crater?

(A) Long ago, a crater now known as Newporte was created when a large object collided with Earth.

(B) Impact craters like Newporte in the United States, are formed when a massive object collides with Earth, creating depressions in the land.

(C) Researchers have investigated the formation of Newporte, an ancient impact crater measuring 3.2 km in diameter located in the United States.

(D) When a large object struck what is now the United States less than 500 million years ago, it created Newporte, a massive crater measuring 3.2 km in diameter.

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While researching a topic, a student has taken the following notes:

- "Raymond's Run" is a short story.
- It was written by African American author Toni Cade Bambara.
- It was first published in her book *Gorilla, My Love* in 1972.
- It is told from a first person perspective.
- It takes place in Harlem.

26 Mark for Review

The student wants to indicate where the short story takes place. Which choice most effectively uses relevant information from the notes to accomplish this goal?

(A) "Raymond's Run" takes place in Harlem.

(B) "Raymond's Run" was written by Toni Cade Bambara.

(C) "Raymond's Run" was published in *Gorilla, My Love*.

(D) "Raymond's Run" is told from a first person perspective.

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While researching a topic, a student has taken the following notes:

- The green iguana is a species of reptile.
- It can be found in Central America and Brazil.
- The green iguana primarily eats leaves and fruit.
- It has an average length of 4.8 feet.

27 Mark for Review

The student wants to specify the average length of the green iguana. Which choice m effectively uses relevant information from the notes to accomplish this goal?

(A) The green iguana is a reptile that primarily eats leaves and fruit.

(B) One species of reptile found in Brazil primarily eats leaves and fruit.

(C) The green iguana can be found in Central America.

(D) The green iguana has an average length of 4.8 feet.

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1 Mark for Review

$$\sqrt{2x + 19} = 5$$

What is the solution to the equation shown?

(A) 22

(B) 12

(C) 3

(D) −7

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2 Mark for Review

The function f is defined by $f(x) = 5x^2$. What is the value of $f(6)$?

(A) 30

(B) 40

(C) 60

(D) 180

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The scatterplot shows the temperature y, in °F, recorded by a meteorologist at various times x, in days since June 1.



During which of the following time periods did the greatest increase in recorded temperature take place?

(A) From $x = 6$ to $x = 7$

(B) From $x = 5$ to $x = 6$

(C) From $x = 2$ to $x = 3$

(D) From $x = 1$ to $x = 2$

roduced response directions

find **more than one correct answer**, enter only one answer.
n **enter** up to 5 characters for a **positive** answer and up to 6 characters
ding the negative sign) for a **negative** answer.
r answer is a **fraction** that doesn't fit in the provided space, enter the decimal
lent.
r answer is a **decimal** that doesn't fit in the provided space, enter it by
ting or rounding at the fourth digit.
r answer is a **mixed number** (such as $3\frac{1}{2}$), enter it as an improper fraction
r its decimal equivalent (3.5).
enter **symbols** such as a percent sign, comma, or dollar sign.

Examples

Answer	Acceptable ways to enter answer	Unacceptable: will NOT receive credit
3.5	3.5 3.50 7/2	31/2 3 1/2

4 Mark for Review

A right rectangular prism has a length of 26 centimeters (cm), a width of 16 cm, and a height of 14 cm. What is the surface area, in cm^2, of the right rectangular prism?

Answer Preview:

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5 Mark for Review

How many solutions does the equation $6x + 4 = 6x + 8$ have?

(A) Infinitely many

(B) Exactly two

(C) Exactly one

(D) Zero

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6 Mark for Review

A newspaper stand sells magazines for $5 each and newspapers for $2 each. The stand needs to sell m magazines and n newspapers for a combined total value of at least $150 each day to cover operational costs. Which inequality represents this situation?

(A) $5m + 2n \leq 150$

(B) $5m + 2n \geq 150$

(C) $7mn \leq 150$

(D) $7mn \geq 150$

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7 Mark for Review

An object is kicked from a platform. The equation $h = -4.9t^2 + 5t + 9$ represents this situation, where h is the height of the object above the ground, in meters, t seconds after it is kicked. Which number represents the height, in meters, from which the object was kicked?

(A) 0

(B) 4.9

(C) 5

(D) 9

Student-produced response directions

- If you find **more than one correct answer**, enter only one answer.
- You can enter up to 5 characters for a **positive** answer and up to 6 characters (including the negative sign) for a **negative** answer.
- If your answer is a **fraction** that doesn't fit in the provided space, enter the decimal equivalent.
- If your answer is a **decimal** that doesn't fit in the provided space, enter it by truncating or rounding at the fourth digit.
- If your answer is a **mixed number** (such as $3\frac{1}{2}$), enter it as an improper fraction (7/2) or its decimal equivalent (3.5).
- Don't enter **symbols** such as a percent sign, comma, or dollar sign.

Examples

Answer	Acceptable ways to enter answer	Unacceptable: will NOT receive credit
3.5	3.5 3.50 7/2	31/2 3 1/2
$\frac{2}{3}$	2/3 .6666 .6667	0.66 .66

8 Mark for Review

The y-intercept of the graph of $y = 81.65^{x}$ in the xy-plane is $(0, y)$. What is the value of y?

Answer Preview:

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9 Mark for Review

If 380% of n is 38, what is the value of n?

(A) 14,440

(B) 1,444

(C) 1,000

(D) 10

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10 Mark for Review

The function $f(x) = 180(x - 2)$ gives the sum of the interior angles, in degrees, for a polygon with x sides. What is the sum of the interior angles, in degrees, for a polygon with 14 sides?

Answer Preview:

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11 Mark for Review

A batch of smoothies consists of 4 cups of milk and 2 bananas and has 1,228 milligrams (mg) of calcium. There is 304 mg of calcium in 1 cup of milk. How much calcium, in mg, is in 1 banana?

(A) 6

(B) 12

(C) 462

(D) 1,216

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12 Mark for Review

The number of bacteria in a liquid medium doubles every day. There are 72,000 bacteria in the liquid medium at the start of an observation. Which of the following represents the number of bacteria, y, in the liquid medium t days after the start of the observation?

(A) $y = \frac{1}{2}(72{,}000)^t$

(B) $y = 2(72{,}000)^t$

(C) $y = 72{,}000\left(\frac{1}{2}\right)^t$

(D) $y = 72{,}000(2)^t$

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13 Mark for Review

Values	Data set A frequency	Data set B frequency	Data set C frequency	Data set D frequency
40	0	0	8	8
43	2	3	3	4
46	4	3	3	2
49	8	8	0	0

The table shows the frequencies of the data values for four data sets. Which data set has the greatest mean?

(A) Data set A

(B) Data set B

(C) Data set C

(D) Data set D

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14 Mark for Review

$$p(x) = 146 - 5x$$

The function p shown gives the number of blank sheets of paper, $p(x)$, remaining in a printer x days after the printer had been loaded with paper. Which statement is the best interpretation of $p(8) = 106$?

(A) The number of blank sheets of paper remaining in the printer decreased by a total of 8 sheets after 106 days.

(B) There were 8 blank sheets of paper remaining in the printer 106 days after the printer had been loaded with paper.

(C) There were 106 blank sheets of paper remaining in the printer 8 days after the printer had been loaded with paper.

(D) The number of blank sheets of paper remaining in the printer decreased by a total of 106 sheets after 8 days.

15 Mark for Review

A bin contains a mixture of T-shirts for two sports teams. The table shows the number of T-shirts in the bin, classified by size and sports team.

	Flames	Panthers	Total
Small	6	9	15
Medium	24	33	57
Large	18	24	42
Total	48	66	114

One T-shirt from the bin will be selected at random. What is the probability of selecting a T-shirt that is medium, given that the T-shirt is a Flames T-shirt? (Express your answer as a decimal or fraction, not as a percent.)

Answer Preview:

16 Mark for Review

$$y = x^2 - 18x + 51$$

The given equation relates the variables x and y. For what value of x does the value of y reach its minimum?

(A) -18

(B) 9

(C) 18

(D) 51

17 Mark for Review

The difference between the measure of angle A and the measure of angle B is $-\frac{3}{4}\pi$ radians. Which expression shows the difference between the measure of angle A and the measure of angle B, in degrees?

(A) $-\frac{3}{4} \cdot \frac{180^\circ}{\pi}$

(B) $-\frac{3}{4}\pi \cdot \frac{\pi}{180^\circ}$

(C) $-\frac{3}{4}\pi \cdot \frac{180^\circ}{\pi}$

(D) $-\frac{3}{4}\pi \cdot \frac{360^\circ}{\pi}$

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18 Mark for Review

In March, an account manager completed 15 more than 3 times the number of sales the account manager completed in April. In March and April, the account manager completed 327 sales. How many sales did the account manager complete in April?

78

Answer Preview: 78

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19 Mark for Review

Triangle QRS is similar to triangle FGH such that Q, R, and S correspond to F, G and H, respectively. Each side of triangle FGH has $\frac{1}{4}$ the length of its corresponding side in triangle QRS. In triangle FGH, the measure of angle F is 35°, the measure of angle G is 8°, and $FG = a$. In triangle QRS, the measure of angle Q is b° and $QR = 20$. What is the value of $a + b$?



Answer Preview:

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Rectangles $ABCD$ and $EFGH$ are similar. The length of each side of $EFGH$ is 10 times the length of the corresponding side of $ABCD$. The area of $ABCD$ is 100 square units. What is the area, in square units, of $EFGH$?

(A) 10

(B) 100

(C) 1,000

(D) 10,000

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21 Mark for Review

For the linear function p, $p(c) = -6$, where c is a constant, $p(3) = 26$, and the slope of the graph of $y = p(x)$ in the xy-plane is 8. For the linear function t, $t(c) = -7$ and $t(4) = 38$. What is the slope of the graph of $y = t(x)$ in the xy-plane?

(A) -1

(B) 2

(C) 8

(D) 9

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22 Mark for Review

The area of a triangle is equal to x^2 square centimeters. The length of the base of the triangle is $2x + 12.5$ centimeters, and the height of the triangle is $x - 5$ centimeters. What is the value of x?

1 Mark for Review

Which expression is a factor of $2x^2 + 30x + 8$?

(A) 2

(B) $4x$

(C) $30x$

(D) $2x^2$

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2 Mark for Review

In the xy-plane, line ℓ has a slope of 4 and an x-intercept of $\left(\frac{4}{3}, 0\right)$. What is the y-intercept of line ℓ?

(A) $\left(\frac{4}{3}, 0\right)$

(B) $\left(-\frac{16}{3}, 0\right)$

(C) $\left(0, \frac{4}{3}\right)$

(D) $\left(0, -\frac{16}{3}\right)$

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3 Mark for Review

Line k is defined by $y = 4x + 1$. Line j is parallel to line k in the xy-plane and passes through the point $(0, 5)$. Which equation defines line j?

(A) $y = -5x + 1$

(B) $y = 5x + 1$

(C) $y = -4x + 5$

(D) $y = 4x + 5$

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4 Mark for Review

For $x > 0$, the function f is defined as follows:

$f(x)$ equals 300% of x

Which of the following could describe this function?

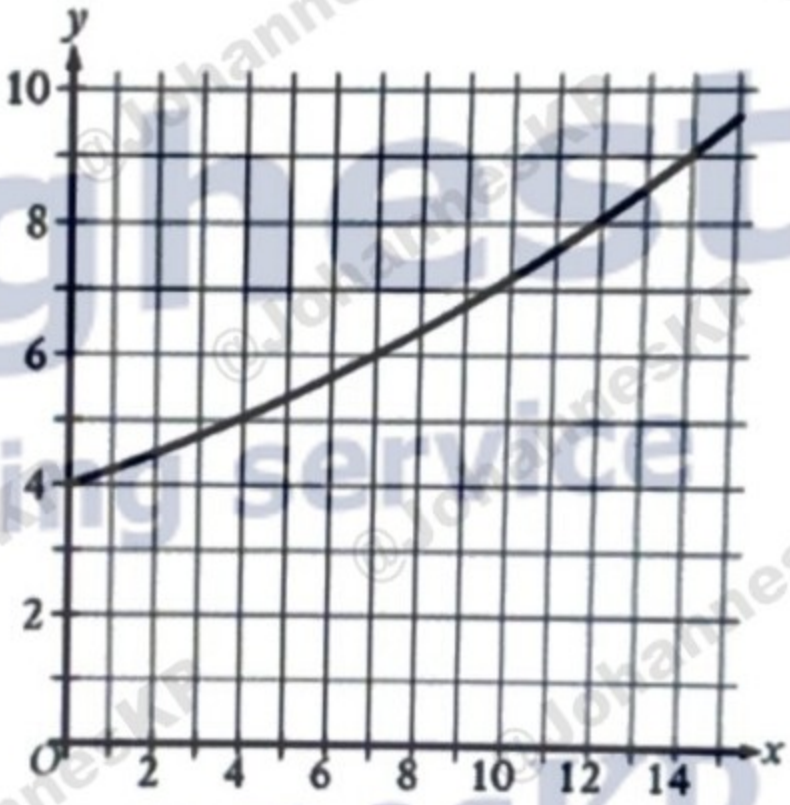
(A) Decreasing exponential

(B) Decreasing linear

(C) Increasing exponential

(D) Increasing linear

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The graph models the population, in thousands, of a town x years since 2003, where $0 \leq x \leq 15$. Which statement is the best interpretation of the point $(1, 4.24)$?

(A) In 2003, the estimated population of the town was 4,240.

(B) In 2004, the estimated population of the town was 4,240.

(C) In 2017, the estimated population of the town was 4,240.

(D) In 2018, the estimated population of the town was 4,240.

7 Mark for Review

A right circular cylinder has a radius of 12 centimeters and a volume of $2,448\pi$ cubic centimeters. What is the height, in centimeters, of the cylinder?

Answer Preview:

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8 Mark for Review

If $a = 3k + 4r$ and $b = 9k - 12r + 6$, which expression is equivalent to $a - b$?

(A) $-6k + 16r - 6$

(B) $-6k + 16r + 6$

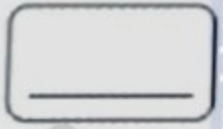
(C) $-6k - 8r + 6$

(D) $-6k - 8r - 6$

9 Mark for Review

$$x = 2 + 8y$$
$$x = 4 - 8y$$

The solution to the given system of equations is (x, y). What is the value of $2x$?



Answer Preview:



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10 Mark for Review

$$3x^2 + x - 5 = 0$$

What is the greatest solution to the given equation?

(A) $-\frac{1}{6} - \frac{\sqrt{61}}{6}$

(B) $-\frac{1}{6} + \frac{\sqrt{61}}{6}$

(C) $-\frac{1}{3} - \frac{\sqrt{61}}{3}$

(D) $-\frac{1}{3} + \frac{\sqrt{61}}{3}$

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11 Mark for Review

For a particular car, the linear function f gives the predicted power, in brake horsepower (bhp), for engine speeds between 1,000 revolutions per minute (rpm) and 6,000 rpm. According to this function, the car's predicted power is 228 bhp at an engine speed of 1,896 rpm and 600 bhp at an engine speed of 4,500 rpm. The equation $f(x) = \frac{1}{7}(x - a) + 228$ defines f, where x is the engine speed, in rpm, and a is a constant. What is the value of a?

Answer Preview:

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12 Mark for Review

According to a model, the estimated volume of a certain Douglas fir tree increases by 15.5% for every increase of 100 centimeters in the tree's height. The equation $y = ab^{\frac{x}{100}}$ represents this model, where y represents the estimated volume, in cubic centimeters, of this Douglas fir tree, x represents the tree's height, in centimeters, and a and b are constants. In this equation, what is the value of b?

(A) 0.155

(B) 1

(C) 1.155

(D) 15.5

13 Mark for Review

$$y = \frac{2}{5}x + 7$$

One of the two equations in a system of linear equations is given. The system has infinitely many solutions. If the second equation in the system is $y = mx + b$, where m and b are constants, what is the value of b?

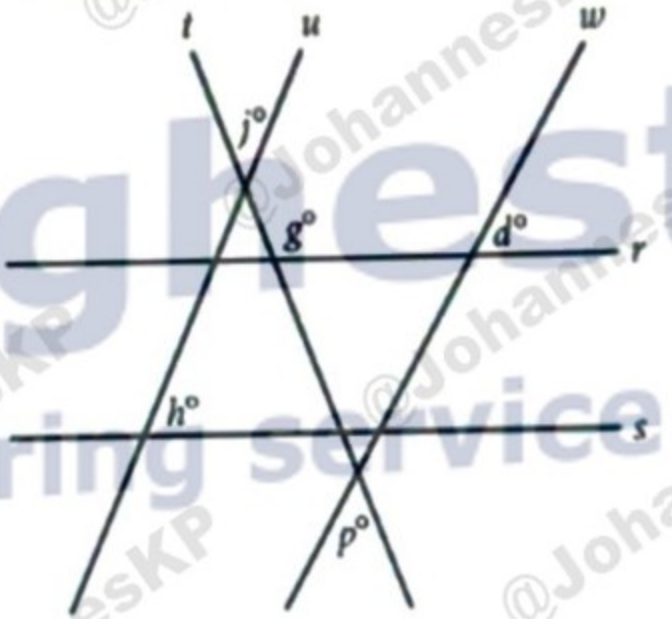
(A) -7

(B) $-\frac{1}{7}$

(C) $\frac{1}{7}$

(D) 7

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Note: Figure not drawn to scale.

In the figure, parallel lines r and s are intersected by lines t, u, and w. If $d = 42$, $g = 143$, and $h > d$, which statement about j and p must be true?

(A) $j = p$

(B) $j + p = 90$

(C) $j > p$

(D) $j < p$

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$$y < -6x - 22$$

$$y > -4x - 7$$

For which of the following tables are all the values of x and their corresponding values of y solutions to the given system of inequalities?

Ⓐ

x	y
-9	27
-10	51
-12	-4

Ⓑ

x	y
-9	32
-10	36
-12	-4

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Ⓒ

x	y
−9	28
−10	36
−12	48

Ⓓ

x	y
−9	30
−10	37
−12	48

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16 Mark for Review

If the perimeter of an equilateral triangle with a height of 46 units is $a\sqrt{3}$ units, what is the value of a?

(A) 46

(B) 92

(C) $\frac{2,116}{3}$

(D) $\frac{4,232}{3}$

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17 Mark for Review

If $\frac{x-5}{4} = \frac{x-5}{11}$, the value of $x - 5$ is between which of the following pairs of values?

(A) −11 and −7

(B) −6 and −3

(C) −3 and 3

(D) 4 and 6

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18 Mark for Review

$$33x^2 + (33s + r)x + rs = 0$$

In the given equation, r and s are positive constants. The product of the solutions to the given equation is krs, where k is a constant. What is the value of k?

Answer Preview:



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19 Mark for Review

A square map has a side length of 35 inches, and 1 inch on the map represents an actual distance of 17 miles. A smaller version of the same map is printed as a square with the side length 55% shorter than the side length of the previous map. On the smaller map, which of the following is closest to the actual distance, in miles, represented by 1 inch?

(A) 7.65

(B) 10.97

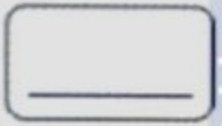
(C) 19.25

(D) 37.78

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20 Mark for Review

The function p is defined by $p(x) = a\left((x+6)^2 - b\right)\left((x+6)^2 - c\right)$, where a, b, and c are constants. In the xy-plane, the graph of $y = p(x)$ passes through the points $(-7, 24)$ and $(0, 899)$. What is the value of $p(-12) + p(-5)$?



Answer Preview:



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21 Mark for Review

A scientist makes batches of bricks using different sand-to-cement ratios to test how the sand-to-cement ratio affects the strength of the brick. For one batch of bricks, the scientist uses 4,880 cubic centimeters (cm^3) of sand and cement, where the ratio of the volume of sand to the volume of cement is 7 to 3. If s represents the volume, in cm^3, of sand and c represents the volume, in cm^3, of cement that the scientist uses for this batch of bricks, which system of equations represents this situation?

(A) $s = c$
$7s + 3c = 4{,}880$
Undo

(B) $s = c$
$3s + 7c = 4{,}880$
Undo

(C) $7s = 3c$
$s + c = 4{,}880$

(D) $3s = 7c$
$s + c = 4{,}880$

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22 Mark for Review

The functions f and g are defined by the given equations, where $x \geq 0$. Which of the following equations displays, as a constant or coefficient, the maximum value of the function it defines, where $x \geq 0$?

I. $f(x) = 16(1.24)^x + 43$

II. $g(x) = 8(0.72)^x$

(A) I only

(B) II only

(C) I and II

(D) Neither I nor II

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