



KSSR STUDY TOOLS - FREE FULL-LENGTH PRACTICE

SAT Full Practice Test 2

Reading and Writing - Math

PRINT AND DIGITAL EDITION

This booklet is aligned question-for-question with the KSSR digital test bank. Take the digital version at https://kssr.press/sat-dashboard/?kssr_test=2.

The answer key and response guidance are included at the back. Do not consult them until you have completed the test.

Content source: separately validated KSSR SAT Test 2 bank, reviewed 27 July 2026. American English edition.

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Candidate information

PAPER PRACTICE FORMAT

This bank contains two 33-question Reading and Writing modules and two 27-question Math modules. For the same timing and navigation used by KSSR online, take the digital version at the link below.

Name: _____ Date: _____

Reading and Writing target time: 64 minutes. Math target time: 70 minutes.

A calculator may be used throughout the Math section. The KSSR online runner includes a calculator.



READING AND WRITING

SECTION INSTRUCTIONS

There are two modules of 33 questions. Choose the best answer for every question.

Reading and Writing Module 1

Words in context

For the 1900 Paris Exposition, W. E. B. Du Bois and his Atlanta University students produced hand-drawn diagrams about Black life in the United States. By presenting evidence of educational, economic, and civic achievement, the diagrams supplied a _____ account to racist depictions that represented Black Americans only through deficiency.

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

- A. derivative
- B. conciliatory
- C. countervailing
- D. perfunctory

Words in context

Alfred Wegener could not identify a satisfactory mechanism for continental drift, but he assembled several _____ lines of evidence: coastlines appeared to fit, related fossils occurred on continents now separated by oceans, and geological formations continued across those continents.

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

- A. convergent
- B. incidental
- C. mutually exclusive
- D. speculative

Words in context

Many instruction pieces in Yoko Ono's *Grapefruit* do not prescribe a single observable result. Because a reader may perform an instruction physically, imagine performing it, or interpret it metaphorically, the work's realization remains deliberately _____.

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

- A. orthodox
- B. instantaneous
- C. immutable
- D. indeterminate

Words in context

Elinor Ostrom's research on common-pool resources challenged the assumption that shared resources are inevitably depleted. Her case studies suggested that successful collective management is _____ on such factors as locally devised rules, monitoring, and mechanisms for resolving disputes.

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

- A. oblivious
- B. contingent
- C. antithetical
- D. extraneous

Words in context

Barbara McClintock's observation that some genetic elements can change position within chromosomes was initially difficult to reconcile with prevailing models of genetic stability. To some researchers, her results therefore appeared _____ rather than foundational.

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

- A. exhaustive
- B. axiomatic
- C. anomalous
- D. redundant

Text structure and purpose

The following text is adapted from W. E. B. Du Bois's 1903 book *The Souls of Black Folk*.

Du Bois describes Black Americans as seeing themselves through their own experience and through the disparaging judgments of a society organized by racism. He calls this divided awareness a "double consciousness," a condition that can produce painful self-scrutiny while also revealing contradictions in the nation's claims about equality.

6. Which choice best describes the function of the phrase "double consciousness" in the text?

- A. It names a medical diagnosis that Du Bois believes social institutions can cure.
- B. It condenses a complex social and psychological condition into a memorable concept.
- C. It distinguishes Du Bois's historical method from his use of quantitative evidence.
- D. It suggests that conflicting perceptions of identity are always equally accurate.

Text structure and purpose

In *O Pioneers!*, Willa Cather first depicts the Nebraska land as resistant to settlers' efforts: crops fail, winds scour the fields, and many families leave. The novel then follows Alexandra Bergson, whose patient observation and calculated experiments allow her farm to prosper. Yet the land is never reduced to property alone; it retains an impersonal power that exceeds any individual's designs.

7. Which choice best describes the overall structure of the text?

- A. It presents two farmers' methods and demonstrates that the less systematic method succeeds.
- B. It lists environmental obstacles and then argues that those obstacles were historically insignificant.
- C. It describes a conflict between siblings and then attributes that conflict entirely to economic hardship.
- D. It moves from resistance, to qualified human success, to a reminder of nature's continuing autonomy.

Text structure and purpose

Charles Darwin filled notebooks with observations, questions, and branching sketches while developing his account of species change. The notebooks do not display a theory arriving fully formed. Instead, they preserve revisions, abandoned possibilities, and tentative analogies, making visible the exploratory reasoning that a finished publication often suppresses.

8. Which choice best states the main purpose of the text?

- A. To explain how Darwin's notebooks reveal scientific reasoning as an iterative process
- B. To argue that Darwin considered publishing his notebooks instead of a formal theory
- C. To show that Darwin's final publications reproduced every idea in his notebooks
- D. To compare Darwin's drawing technique with that of nineteenth-century artists

Cross-text connections

Text 1

Karl Popper argued that a scientific claim should be vulnerable to tests that could show it to be false. On this account, bold conjectures advance knowledge when they survive serious attempts at refutation.

Text 2

Thomas Kuhn emphasized that scientists ordinarily work within paradigms that shape legitimate questions, methods, and standards. An anomalous result does not automatically overthrow a paradigm; its significance is interpreted through an existing disciplinary framework.

9. Based on the texts, how would the author of Text 2 most likely qualify the account in Text 1?

- A. By arguing that scientists never test claims against evidence
- B. By claiming that falsifiability applies only to the social sciences
- C. By noting that whether a result counts as a decisive refutation can depend on a scientific community's framework
- D. By insisting that paradigms prevent scientists from recognizing any anomalous results

Text structure and purpose

Text 1

Sol LeWitt argued that in conceptual art, the idea may function like a machine that generates the work. Accordingly, a wall drawing can be executed by people following the artist's written directions.

Text 2

Even when two installations follow the same directions, their walls, dimensions, materials, and institutional settings differ. A work generated by instructions can therefore remain conceptually continuous while changing perceptibly from one realization to another.

10. Which choice best describes the relationship between the texts?

- A. Text 2 rejects Text 1's characterization of instructions as relevant to conceptual art.
- B. Text 2 develops a consequence of Text 1 by distinguishing conceptual identity from material sameness.
- C. Text 2 shows that LeWitt's wall drawings were never executed by anyone other than LeWitt.
- D. Text 2 argues that material differences make it impossible to identify repeated realizations as one work.

Central ideas and details

In 1967, while analyzing records from a radio telescope, Jocelyn Bell Burnell noticed a signal whose pulses recurred with striking regularity. After instrumental and terrestrial explanations were investigated, the signal was identified as evidence of a rapidly rotating neutron star, or pulsar. The discovery supplied the first observed evidence that neutron stars, which had previously been theorized, actually exist.

11. Which choice best states the main idea of the text?

- A. Bell Burnell designed a radio telescope specifically to confirm the existence of neutron stars.
- B. Pulsars were accepted as neutron stars before any recurring radio signal was detected.
- C. The regularity of the signal proved immediately that it came from an artificial source.
- D. Bell Burnell's analysis of an unusual radio signal helped establish observational evidence for neutron stars.

Central ideas and details

At the 1955 Bandung Conference, representatives of twenty-nine Asian and African governments discussed decolonization, economic cooperation, racial discrimination, and peaceful coexistence. Although the participants did not share a single ideology, the conference asserted that recently independent states could pursue collective interests without simply aligning themselves with either Cold War bloc.

12. Which choice best states the main idea of the text?

- A. Bandung created a forum for diverse postcolonial states to articulate priorities beyond the Cold War's two-bloc framework.
- B. Bandung required participating states to adopt a uniform economic and political system.
- C. Bandung was organized principally to create a military alliance against European states.
- D. Bandung ended disagreements among participating governments about decolonization.

Central ideas and details

The following text is adapted from Mary Shelley's 1818 novel *Frankenstein*. Victor has just brought the creature to life.

Victor had pursued his experiment with an ardor that displaced sleep, health, and ordinary affection. Yet when the creature opened its eyes, the achievement he had imagined as magnificent appeared to him intolerable, and he fled from what he had made.

13. According to the text, what causes Victor's response to the creature?

- A. He discovers that another scientist has already completed the same experiment.
- B. He realizes that the creature cannot move or perceive its surroundings.
- C. The reality of his achievement abruptly conflicts with the exalted result he had anticipated.
- D. The creature immediately accuses Victor of neglecting his family.

Central ideas and details

The graph shows the approximate length, in Earth hours, of one rotation for selected planets.

Approximate Rotation Periods of Selected Planets

Source: NASA Space Place. Values rounded to the nearest hour.

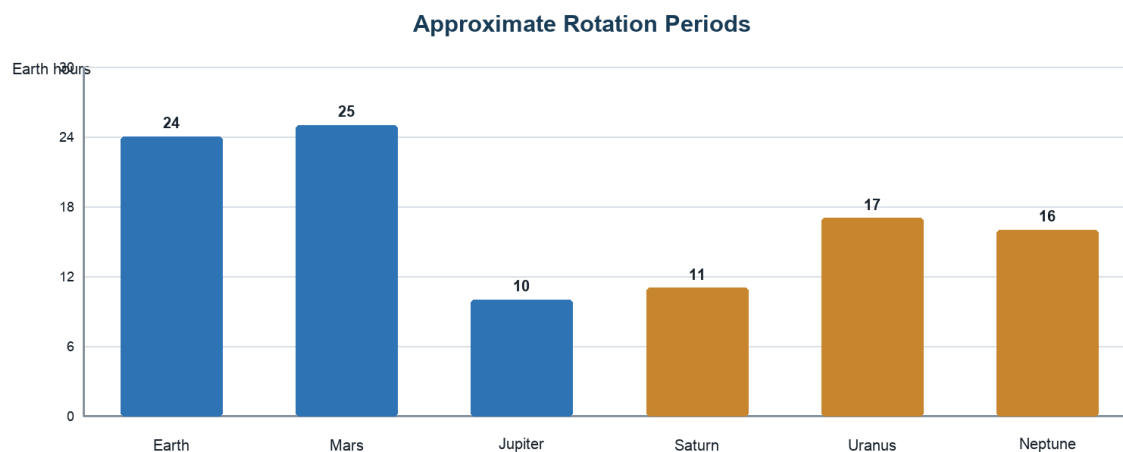


Image description: The graph shows the approximate length, in Earth hours, of one rotation for selected planets.

14. A student claims that the giant planets shown all rotate more quickly than the terrestrial planets shown. Which choice best evaluates the claim?

- A. The claim is not supported because Uranus rotates more slowly than Mars.
- B. The claim is supported because each giant planet shown has a shorter rotation period than both Earth and Mars.
- C. The claim is not supported because Neptune's rotation period is longer than Jupiter's.
- D. The claim is supported because rotation periods increase continuously with distance from the Sun.

Central ideas and details

The table lists selected works associated with conceptual art and related practices.

Artist	Work	Year
Marcel Duchamp	Fountain	1917
Yoko Ono	Painting to Be Stepped On	1960-1961
Yoko Ono	Grapefruit	1964
Joseph Kosuth	One and Three Chairs	1965
On Kawara	I GOT UP begins	1968

15. Which choice is best supported by the table?

- A. Kosuth completed One and Three Chairs before Ono produced any instruction-based work listed.
- B. Kawara began I GOT UP in the same year that Ono published Grapefruit.
- C. Duchamp submitted Fountain after all the other listed works had begun.
- D. The listed works by Ono precede Kosuth's One and Three Chairs, whereas Kawara's listed project begins later.

Command of evidence - quantitative

The table shows the Nobel Prize year for selected scientists and the work cited by the Nobel Committee.

Scientist	Work recognized	Nobel Prize year
Marie Curie	Research on radiation phenomena	1903
Barbara McClintock	Discovery of mobile genetic elements	1983
Tu Youyou	Discoveries concerning a therapy against malaria	2015
Emmanuelle Charpentier and Jennifer Doudna	Method for genome editing	2020

16. Which choice most effectively describes the intervals in the table?

- A. The interval from Curie's prize to McClintock's is longer than either later interval shown.
- B. The interval from McClintock's prize to Tu's is shorter than the interval from Tu's prize to the 2020 prize.
- C. All three intervals between consecutive rows are equal.
- D. The two prizes awarded in the twenty-first century are separated by more than thirty years.

Inferences

When atmospheric carbon dioxide dissolves in seawater, chemical reactions increase the concentration of hydrogen ions and reduce the availability of carbonate ions. Many corals and shellfish use carbonate ions to build calcium carbonate structures. It follows that an experiment testing the effects of elevated dissolved carbon dioxide on a calcifying organism should _____.

17. Which choice most logically completes the text?

- A. assume that the organism's access to carbonate ions will necessarily increase
- B. measure only water temperature, since carbonate chemistry is irrelevant
- C. consider whether reduced carbonate availability affects the organism's capacity to build or maintain its structure
- D. conclude that seawater becomes chemically identical to pure acid

Inferences

Erving Goffman's dramaturgical account of social interaction distinguishes between "frontstage" settings, where people manage impressions before an audience, and "backstage" settings, where they may relax or prepare those performances. A researcher observes that restaurant servers speak formally in the dining room but use shorthand and openly discuss mistakes in the kitchen. Goffman's framework would most strongly support the inference that _____.

18. Which choice most logically completes the text?

- A. the servers' kitchen behavior is unrelated to their work in the dining room
- B. the contrast reflects different interactional demands in audience-facing and less public settings
- C. the servers are consciously deceiving every customer they encounter
- D. formal speech is an inherent trait that disappears whenever people enter a kitchen

Subject-verb agreement

Neither the object, the photograph, nor the dictionary definition in Kosuth's *One and Three Chairs* _____ presented as the uniquely authoritative version of a chair.

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

- A. is
- B. are
- C. were
- D. have been

Boundaries

By the time the 1955 Bandung Conference opened, several participating countries _____ independence only recently, a circumstance that shaped the conference's emphasis on sovereignty and decolonization.

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

- A. gain
- B. are gaining
- C. will gain
- D. had gained

Form, structure, and sense

The notebooks in which Darwin sketched branching relationships among species, together with the specimens he collected and the observations he recorded, _____ historians evidence of his theory's gradual development.

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

- A. provides
- B. provide
- C. providing
- D. has provided

Form, structure, and sense

Incorporating a physical chair, a photograph, and a dictionary entry, _____.

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

- A. representation is investigated in Kosuth's One and Three Chairs
- B. Kosuth's investigation of representation appears in One and Three Chairs
- C. Kosuth's One and Three Chairs investigates competing forms of representation
- D. competing forms of representation are what One and Three Chairs investigates by Kosuth

Form, structure, and sense

Wegener's evidence persuaded some contemporaries that continents had moved _____ proposed mechanism, however, remained inadequate.

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

- A. in the past, his
- B. in the past; his
- C. in the past his
- D. in the past and his

Form, structure, and sense

Ostrom did not claim that communities always manage shared resources _____ she identified institutional conditions under which cooperation can endure.

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

- A. successfully, instead
- B. successfully instead;
- C. successfully, instead,
- D. successfully; instead,

Form, structure, and sense

Jocelyn Bell Burnell detected an unusually regular radio signal _____ after alternative explanations were investigated, the signal was identified as coming from a pulsar.

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

- A. while analyzing telescope records;
- B. while analyzing telescope records,
- C. while analyzing telescope records
- D. while analyzing telescope records:

Form, structure, and sense

The Bandung delegates discussed several related _____ political self-determination, economic cooperation, opposition to racial discrimination, and peaceful coexistence.

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

- A. priorities, including,
- B. priorities; including
- C. priorities:
- D. priorities and:

Form, structure, and sense

Du Bois's data portraits, many of which use vivid geometric forms, do more than summarize _____ they also make an argument about who has the authority to represent Black life.

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

- A. statistics, they
- B. statistics;
- C. statistics and;
- D. statistics,

Transitions

McClintock's findings initially seemed incompatible with static accounts of chromosome organization. _____, later research established mobile genetic elements as a fundamental feature of genomes.

28. Which choice completes the text with the most logical transition?

- A. For example,
- B. Likewise,
- C. In particular,
- D. Nevertheless,

Transitions

Conceptual art often shifts attention from a handcrafted object to an organizing idea. _____, LeWitt's wall drawings can be realized by others who follow written instructions.

29. Which choice completes the text with the most logical transition?

- A. For instance,
- B. Conversely,
- C. Meanwhile,
- D. Instead,

Transitions

Victor Frankenstein's experiment succeeds in the narrow sense that the creature becomes animate. _____, the success does not produce the fulfillment Victor anticipated; it provokes horror and flight.

30. Which choice completes the text with the most logical transition?

- A. Similarly,
- B. Therefore,
- C. However,
- D. Specifically,

Rhetorical synthesis

While researching the Bandung Conference, a student has taken the following notes:

The conference took place in Bandung, Indonesia, in April 1955.

Representatives of twenty-nine Asian and African governments attended.

Participants discussed decolonization, economic cooperation, human rights, and peaceful coexistence.

The participating governments represented a wide range of ideological positions.

31. The student wants to emphasize that the conference created cooperation without ideological uniformity. Which choice most effectively uses relevant information from the notes?

- A. The Bandung Conference took place in Indonesia in April 1955 and included discussions of human rights.
- B. Although the twenty-nine participating governments held diverse ideological positions, they jointly addressed decolonization, cooperation, and peaceful coexistence.
- C. Twenty-nine governments sent representatives to an Indonesian city called Bandung.
- D. Decolonization was one of several subjects discussed at the conference.

Rhetorical synthesis

While researching Barbara McClintock, a student has taken the following notes:

McClintock studied inheritance in maize.

She linked changes in kernel color to changes in chromosomes.

In the 1940s and 1950s, she demonstrated that some genetic elements can change position.

The Nobel Committee awarded her the 1983 prize in physiology or medicine for discovering mobile genetic elements.

32. The student wants to connect McClintock's experimental system to her major conclusion. Which choice most effectively uses relevant information from the notes?

- A. McClintock received a Nobel Prize in 1983 after conducting research in the 1940s and 1950s.
- B. Maize kernels can differ in color, and chromosomes occur in the nuclei of cells.
- C. McClintock studied inheritance for many years before receiving international recognition.
- D. By relating changing color patterns in maize kernels to chromosomal changes, McClintock developed evidence that genetic elements can move.

Rhetorical synthesis

While researching Yoko Ono's Grapefruit, a student has taken the following notes:

Ono self-published Grapefruit in 1964.

The book collects text-based instructions composed over several years.

Some instructions can be enacted; others depend primarily on imagination.

The format challenges the assumption that an artwork must be a unique material object made entirely by the artist.

33. The student wants to explain how the book's form advances its artistic argument. Which choice most effectively uses relevant information from the notes?

- A. By presenting enactable and imaginative instructions as artworks, Grapefruit uses its form to question whether art requires a unique object made by the artist.
- B. Grapefruit was self-published in 1964 and contains texts written over several years.
- C. Some instructions in Grapefruit are easier to perform than others.
- D. Ono's book is associated with conceptual and performance art.

Reading and Writing Module 2

Words in context

Because several theories can sometimes accommodate the same body of observations, evidence alone may leave a scientific choice _____. Additional assumptions about scope, simplicity, or explanatory power can influence which theory researchers prefer.

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

- A. self-evident
- B. underdetermined
- C. immutable
- D. inconsequential

Words in context

In later discussions of scientific revolutions, Thomas Kuhn clarified some of his most sweeping early formulations. These revisions did not eliminate the idea of incommensurability, but they did _____ the claim that rival paradigms are wholly incapable of meaningful comparison.

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

- A. corroborate
- B. codify
- C. precipitate
- D. attenuate

Words in context

Sociologists warn that a statistical category can be useful without corresponding to a natural and fixed division in the world. To _____ such a category is to treat an analytical construction as though it were an independently existing thing.

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

- A. reify
- B. mitigate
- C. vindicate
- D. enumerate

Words in context

The initial interpretation of an unexpected signal is often _____: researchers must still exclude instrumental error, terrestrial interference, and alternative astrophysical causes before treating the interpretation as secure.

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

- A. exhaustive
- B. incontrovertible
- C. provisional
- D. superfluous

Words in context

For Kuhn, successive scientific paradigms can be _____ when their practitioners use central terms differently and disagree about appropriate standards of evaluation; no completely neutral measure settles every dispute between them.

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

- A. fungible
- B. incommensurable
- C. derivative
- D. synchronous

Text structure and purpose

The following text is adapted from Charles W. Chesnutt's 1899 collection *The Conjure Woman*. A white northern narrator repeatedly listens to stories told by Julius, a formerly enslaved man.

The narrator often announces his skepticism toward Julius's tales, yet the tales disclose histories and motives the narrator overlooks. Moreover, Julius sometimes uses storytelling to influence decisions about land, labor, or family. The frame therefore makes the narrator's confidence part of the story's irony.

39. Which choice best describes the function of the final sentence?

- A. It establishes that Julius's stories are historically exact in every detail.
- B. It explains why the narrator refuses to listen to Julius after their first meeting.
- C. It shows how the narrative arrangement invites readers to question the skeptic's authority.
- D. It argues that irony prevents stories from conveying practical motives.

Text structure and purpose

In *Frankenstein*, Robert Walton's letters introduce an explorer whose desire for distinction has isolated him. Victor Frankenstein then recounts a parallel pursuit of forbidden achievement, while the creature narrates the suffering produced by Victor's abandonment. By nesting these accounts, the novel repeatedly changes the position from which ambition and responsibility are judged.

40. Which choice best describes the overall structure of the text?

- A. It identifies parallel ambitions, adds an excluded perspective, and explains how the nested narratives complicate judgment.
- B. It lists three narrators and concludes that they offer indistinguishable accounts of the same events.
- C. It contrasts scientific and geographic exploration in order to show that only the latter is dangerous.
- D. It describes Walton's correspondence and then argues that Victor never tells his own story.

Text structure and purpose

Jacob Lawrence's *Migration Series* consists of sixty panels accompanied by concise captions. Rather than center a single protagonist, the sequence depicts departures, crowded stations, industrial labor, discrimination, and new institutions. The recurring forms and compressed scenes transform a vast demographic movement into a collective visual narrative without implying that every migrant's experience was identical.

41. Which choice best states the main purpose of the text?

- A. To identify the single historical figure represented in every panel of Lawrence's series
- B. To argue that Lawrence's captions are more important than the painted panels
- C. To show that the Great Migration produced identical experiences in every destination
- D. To explain how Lawrence represents collective history while preserving its complexity

Cross-text connections

Text 1

Mark Granovetter's "strength of weak ties" argument proposes that acquaintances can provide access to information and social circles unavailable through a person's close contacts, whose networks often overlap substantially.

Text 2

Strong ties may be especially important when people need sustained care, material assistance, or trust. A network rich in acquaintances can circulate novel information yet still provide little support during a prolonged crisis.

42. How would the author of Text 2 most likely respond to Text 1?

- A. By denying that acquaintances can ever transmit useful information
- B. By agreeing about informational reach while distinguishing it from the support often supplied by strong ties
- C. By arguing that overlapping networks always contain more novel information
- D. By claiming that tie strength cannot vary across social relationships

Text structure and purpose

Text 1

Hans Haacke's institutional critique treats museums not as neutral containers but as organizations embedded in political and economic relationships. Information about ownership, sponsorship, and real estate can therefore become artistic material.

Text 2

Museums preserving works of institutional critique face a paradox: cataloging and displaying a critique may extend its visibility, but institutional framing can also domesticate the challenge or redirect its meaning.

43. Which choice best describes the relationship between the texts?

- A. Text 2 denies that museums have political or economic relationships.
- B. Text 2 claims that institutional critique cannot be collected or displayed under any circumstances.
- C. Text 2 extends Text 1 by considering how museums can alter the force of works that scrutinize them.
- D. Text 2 replaces Haacke's focus on institutions with a discussion of artistic technique.

Central ideas and details

Astronomer Vera Rubin measured how rapidly stars and gas orbit in spiral galaxies. At distances where visible matter thins out, orbital speeds remained higher than calculations based on that visible matter predicted. The persistence of these unexpectedly high speeds supplied strong evidence that galaxies contain substantial unseen mass.

44. Which choice best states the main idea of the text?

- A. Rubin's measurements of galactic rotation strengthened the case for matter not accounted for by visible material.
- B. Rubin showed that stars near galactic centers always move more slowly than expected.
- C. Rubin concluded that visible matter has no effect on galactic rotation.
- D. Rubin's observations eliminated every alternative theory of galactic motion.

Central ideas and details

Du Bois's concept of double consciousness describes the strain of understanding oneself both from within and through a society's demeaning racial judgments. The concept is not simply a claim that an individual has two personalities. It identifies a historically produced conflict in self-perception, one linked to unequal social power.

45. Which choice best states the main idea of the text?

- A. Double consciousness refers to a neurological division unrelated to social history.
- B. Du Bois believed that self-perception is entirely private and unaffected by institutions.
- C. The concept applies only when two individuals openly disagree about identity.
- D. Double consciousness names a socially produced tension between self-understanding and imposed racial judgment.

Central ideas and details

In the 1970s, Tu Youyou and her research team investigated traditional Chinese medical texts while searching for antimalarial compounds. A historical preparation method prompted the team to use a low-temperature extraction from sweet wormwood, helping preserve the active substance later identified as artemisinin. The episode illustrates how an old source can guide modern experimentation without itself substituting for experimental validation.

46. Which choice best states the main idea of the text?

- A. Tu's team accepted every traditional remedy without conducting laboratory tests.
- B. Historical knowledge informed an experimental modification that contributed to the development of an antimalarial treatment.
- C. Artemisinin was first isolated through a high-temperature process unrelated to traditional sources.
- D. Modern experimental methods are incompatible with evidence found in historical medical texts.

Command of evidence - quantitative

The graph shows the orbital period, in Earth days, of selected planets.

Orbital Periods of Selected Planets

Source: NASA Space Place. Values in Earth days.

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

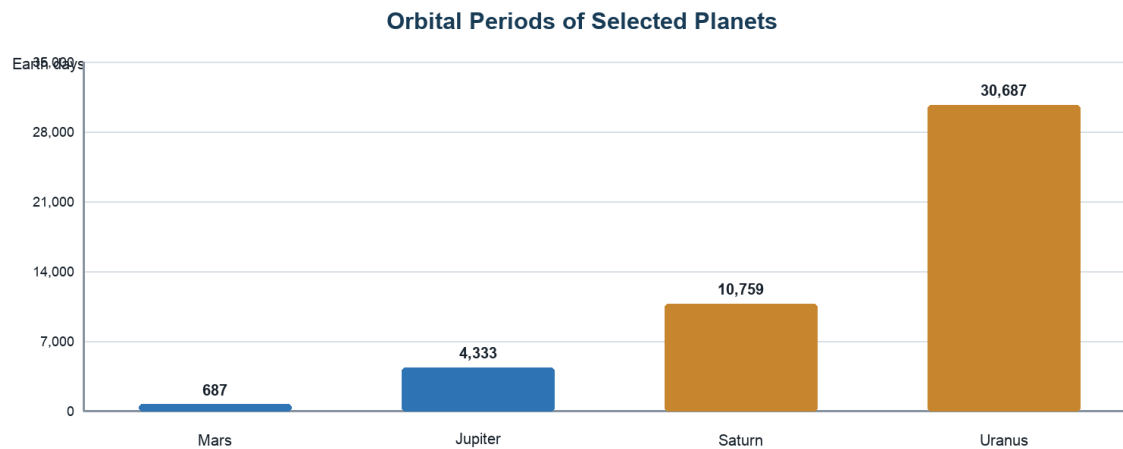


Image description: The graph shows the orbital period, in Earth days, of selected planets.

47. The increase in orbital period is not constant across the displayed planets: _____

- A. Mars's orbital period is more than four thousand days longer than Jupiter's.
- B. Saturn's orbital period is less than twice Jupiter's.
- C. the increase from Saturn to Uranus is substantially larger than the increase from Jupiter to Saturn.
- D. Uranus's orbital period is shorter than each of the other periods shown.

Command of evidence - quantitative

The graph shows selected annual mean carbon dioxide measurements from Mauna Loa Observatory, in parts per million (ppm).

Selected Annual Mean CO₂ Measurements at Mauna Loa

Source: NOAA Global Monitoring Laboratory. Values in parts per million.

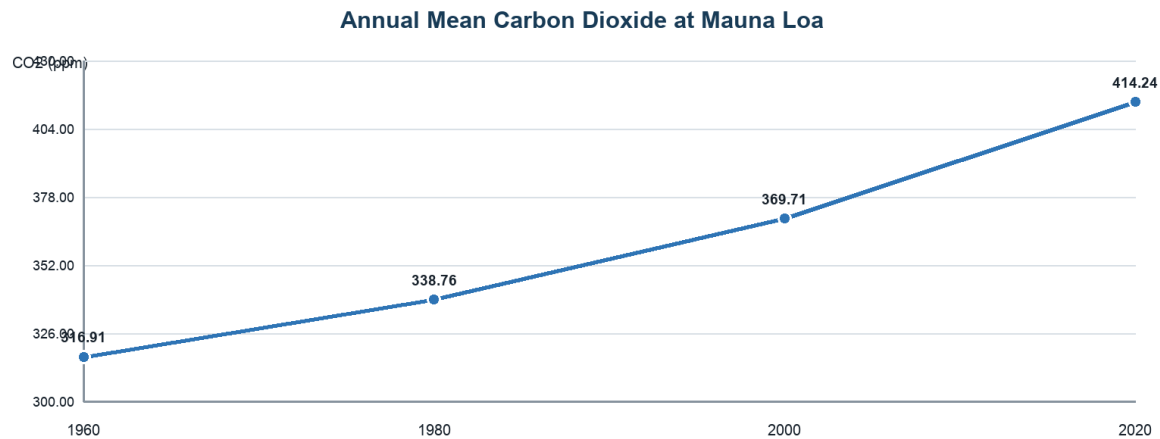


Image description: The graph shows selected annual mean carbon dioxide measurements from Mauna Loa Observatory, in parts per million (ppm).

48. A researcher observes that the absolute increase becomes larger in each successive twenty-year interval shown. Which choice best supports the observation?

- A. The increases are about 21.85 ppm, 30.95 ppm, and 44.53 ppm across the three successive intervals.
- B. The increase from 1960 to 1980 is larger than the increase from 2000 to 2020.
- C. The 1980 value is approximately equal to the 2020 value.
- D. Each twenty-year interval shows an increase of exactly 20 ppm.

Command of evidence - quantitative

The graph shows United Nations membership in selected years.

United Nations Membership in Selected Years

Source: United Nations, Growth in UN Membership.

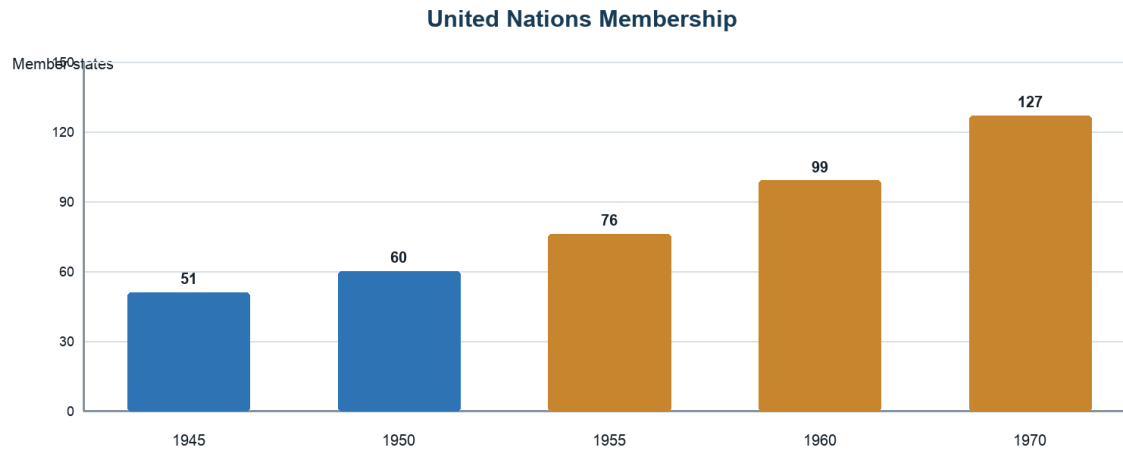


Image description: The graph shows United Nations membership in selected years.

49. The growth in membership reflected, in part, the admission of newly independent states. Which choice most effectively describes the data shown?

- A. Membership declined between 1945 and 1950 before increasing in 1960.
- B. The increase from 1960 to 1970 was greater than the increase from 1950 to 1960.
- C. Membership remained unchanged between 1955 and 1960.
- D. The largest ten-year increase shown occurred from 1950 to 1960.

Inferences

A study compares two groups' performance on reasoning tasks. One group receives tasks requiring only verbal responses; the other receives tasks that require both reasoning and intricate manual manipulation. If the second group performs worse, the design does not establish that its reasoning ability is lower because _____.

50. Which choice most logically completes the text?

- A. all reasoning tasks necessarily measure manual dexterity
- B. task dexterity is confounded with group membership and could contribute to the performance difference
- C. verbal tasks cannot produce quantitative results
- D. assigning different tasks always proves that the groups have identical abilities

Inferences

Within Kuhn's account, an anomalous result does not by itself compel scientists to abandon a paradigm. Researchers may question an instrument, revise an auxiliary assumption, or set the puzzle aside, especially if the paradigm remains productive elsewhere. Thus, a paradigm is most likely to enter crisis when _____.

51. Which choice most logically completes the text?

- A. researchers encounter any result they did not predict
- B. one scientist proposes a new term for an established observation
- C. persistent important anomalies erode confidence in the framework's capacity to solve recognized problems
- D. a scientific community agrees that its existing methods remain fully adequate

Form, structure, and sense

The evidence Rubin gathered from spiral galaxies, along with observations by other astronomers, _____ a central reason that dark matter became widely accepted as a scientific problem.

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

- A. remain
- B. have remained
- C. remaining
- D. remains

Form, structure, and sense

If the researchers had controlled for the tasks' physical difficulty, they _____ more confidently whether the performance difference reflected reasoning ability.

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

- A. could have determined
- B. determine
- C. will determine
- D. had determined

Subject-verb agreement

Each of Lawrence's sixty panels, together with its caption, _____ one episode within a larger account of migration.

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

- A. situate
- B. have situated
- C. situates
- D. are situating

Form, structure, and sense

After consulting a historical preparation recorded in a Chinese medical text, _____.

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

- A. low-temperature extraction was tested by Tu Youyou's team
- B. Tu Youyou's team tested a low-temperature extraction
- C. there was a low-temperature extraction tested by Tu Youyou's team
- D. the preservation of an active compound became more likely

Form, structure, and sense

Rubin's observations did not reveal dark matter _____ they revealed a discrepancy between visible mass and galactic motion that unseen mass could explain.

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

- A. directly, rather
- B. directly; rather,
- C. directly rather,
- D. directly and rather

Subject-verb agreement

Granovetter's argument concerns the informational reach of _____ it does not entail that weak ties provide every form of social support.

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

- A. acquaintances, and
- B. acquaintances;
- C. acquaintances
- D. acquaintances,

Form, structure, and sense

The Bandung Conference advanced several principles: respect for sovereignty, opposition to racial discrimination, and _____.

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

- A. support for peaceful coexistence
- B. peaceful coexistence was supported
- C. supporting peaceful coexistence was one of them
- D. the delegates supported peaceful coexistence

Form, structure, and sense

Haacke's work can present institutional facts as artistic _____ donor relationships, property records, or the wording of a museum poll.

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

- A. material, such as,
- B. material; such as
- C. material, such as
- D. material such as;

Form, structure, and sense

The term "dark matter" names an inference from gravitational effects, not a substance that astronomers have already _____ consequently, competing accounts of those effects remain scientifically relevant.

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

- A. identified, consequently
- B. identified consequently,
- C. identified and consequently
- D. identified; consequently,

Transitions

Weak ties may connect a person to unfamiliar information. _____, strong ties may be better positioned to provide sustained care during a crisis.

61. Which choice completes the text with the most logical transition?

- A. By contrast,
- B. Therefore,
- C. For example,
- D. Similarly,

Transitions

An anomaly can sometimes be accommodated by revising an auxiliary assumption. _____, Kuhn did not treat every unexpected observation as an immediate scientific revolution.

62. Which choice completes the text with the most logical transition?

- A. Accordingly,
- B. Nevertheless,
- C. Meanwhile,
- D. For instance,

Transitions

Tu Youyou's team drew a clue from a historical text. _____, the treatment's scientific standing depended on extraction, testing, isolation of the active compound, and further validation.

63. Which choice completes the text with the most logical transition?

- A. In other words,
- B. Consequently,
- C. Even so,
- D. Similarly,

Rhetorical synthesis

While researching Vera Rubin, a student has taken the following notes:

Rubin measured orbital speeds in spiral galaxies.

At large distances from galactic centers, visible matter becomes sparse.

The measured speeds remained higher than predictions based only on visible matter.

Additional unseen mass could account for the discrepancy.

64. The student wants to state the reasoning that connects Rubin's observations to dark matter. Which choice most effectively uses relevant information from the notes?
- A. Rubin measured spiral galaxies, which contain both stars and gas.
 - B. Visible matter becomes sparse far from the centers of many spiral galaxies.
 - C. Dark matter is unseen, so astronomers must study visible stars instead.
 - D. Because outer galactic material orbited faster than visible mass alone predicted, Rubin's measurements supported the inference that additional unseen mass affects galactic motion.

Rhetorical synthesis

While researching the growth of United Nations membership, a student has taken the following notes:

The UN had 51 original member states in 1945.

It had 60 member states in 1950.

It had 99 member states in 1960.

It had 127 member states in 1970.

Many states admitted during this period had recently gained independence.

65. The student wants to emphasize the relationship between decolonization and institutional change. Which choice most effectively uses relevant information from the notes?
- A. The United Nations began with 51 original members in 1945.
 - B. As decolonization produced newly independent states, UN membership expanded from 51 in 1945 to 127 in 1970.
 - C. UN membership was 60 in 1950 and 99 in 1960.
 - D. Some UN members gained independence before others did.

Rhetorical synthesis

While researching Jacob Lawrence, a student has taken the following notes:

The Migration Series contains sixty painted panels.

Lawrence paired the panels with concise captions.

The series depicts many phases of the Great Migration.

It includes departure, travel, labor, discrimination, and institution building.

No single protagonist appears throughout the entire sequence.

66. The student wants to explain how the series represents collective history. Which choice most effectively uses relevant information from the notes?
- A. By sequencing sixty captioned scenes rather than following one protagonist, Lawrence represents migration as a collective process encompassing varied experiences.
 - B. Lawrence painted sixty panels and wrote short captions for each one.
 - C. The series includes scenes of travel as well as scenes of work.
 - D. No single figure appears in every panel, although some subjects recur.

MATH

SECTION INSTRUCTIONS

There are two modules of 27 questions. For student-produced response items, write the exact value in the response line.

Math Module 1

1. What is the median of the data set 22, 31, 16, 20, 25?
 - A. 22
 - B. 25
 - C. 20
 - D. $114/5$
2. A cyclist travels 40 miles at a constant speed of 8 miles per hour. How many hours does the trip take?
 - A. 32
 - B. 8
 - C. 6
 - D. 5

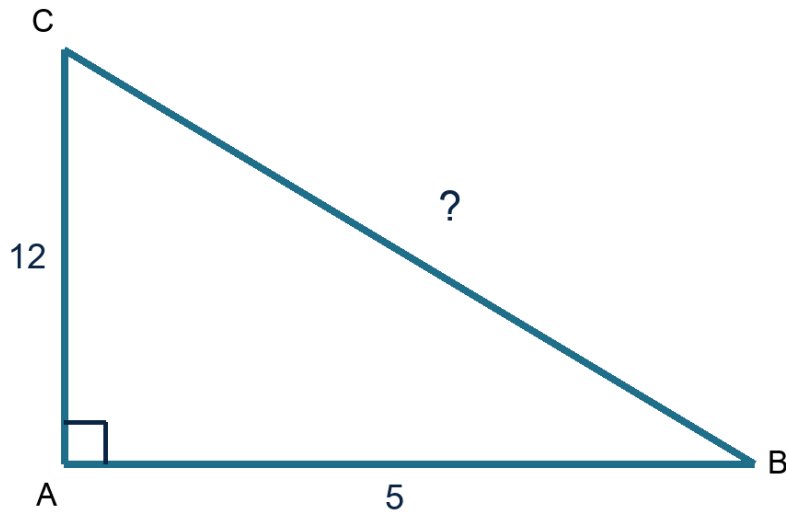


Image description: The diagram shows a right triangle.

3. The diagram shows a right triangle. What is the length of its hypotenuse?
- A. 17
 - B. 13
 - C. 10
 - D. 12
4. Red and blue tiles are used in a ratio of 4:8. If 32 red tiles are used, how many blue tiles are used?
- A. 8
 - B. 64
 - C. 32
 - D. 40
5. A community art studio charges a one-time materials fee of \$18 and \$12 for each class. Mina paid \$198 in total. How many classes did she take?
- A. 14
 - B. 16
 - C. 15
 - D. $33/2$

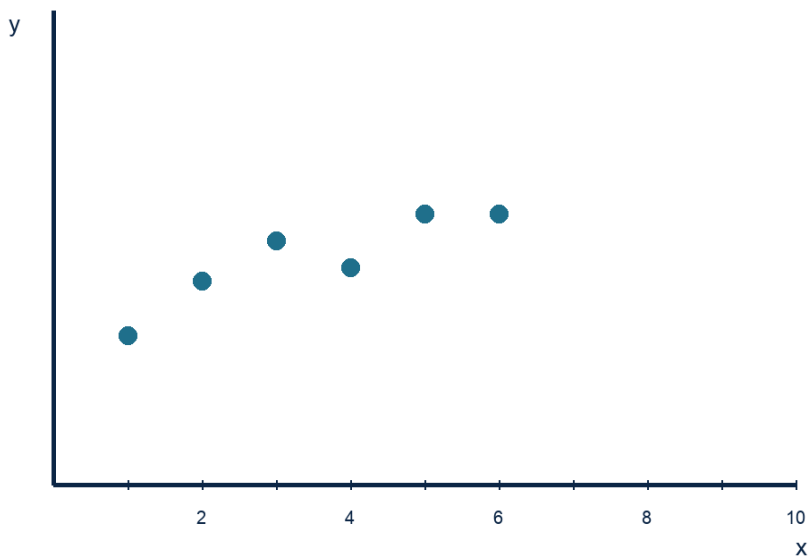


Image description: The scatterplot shows a relationship between x and y.

6. The scatterplot shows a relationship between x and y. A reasonable line of best fit is $y = 2x + 10$. According to this model, what is the predicted value of y when $x = 7$?

Response: _____

7. The equation $y = 4x - 9$ relates x and y. Which equation expresses x in terms of y?

- A. $x = (y + 9)/4$
- B. $x = 4y + 9$
- C. $x = y/4 - 9$
- D. $x = (y - 9)/4$

8. A line passes through $(-1, -6)$ and $(1, 4)$. What is the slope of the line?

- A. 2
- B. 10
- C. 5
- D. -5

9. An account starts with \$250 and grows by 5% each year with no additional deposits. Which expression gives the balance after 2 years?

- A. $250 + 0.05(2)$
- B. $250(1.05)^2$
- C. $250(1 + 5)^2$
- D. $250(0.05)^2$

x	f(x)
-1	6
0	4
1	2
2	0

10. The table shows values of a linear function f . What is $f(4)$?

Response: _____

11. A quantity is modeled by $f(t) = 7(3)^t$. What is $f(3)$?

- A. 196
- B. 189
- C. 34
- D. 63

12. The function $V(t) = 383 - 14t$ gives the volume of water, in liters, in a tank t minutes after draining begins. What does 14 represent?

- A. The tank initially contains 14 liters.
- B. The tank empties after 14 minutes.
- C. The tank loses 14 liters of water per minute.
- D. The tank gains 14 liters per minute.

13. Which equation represents the line with slope -2 that passes through $(1, -6)$?

- A. $y = -2x + 4$
- B. $y = -2x - 4$
- C. $y = 2x - 4$
- D. $y = -4x - 2$

14. Which expression is equivalent to $x^2 + 4x - 12$?

- A. $(x - 2)(x - 6)$
- B. $(x + 2)(x + 6)$
- C. $(x - 2)(x + 6)$
- D. $(x + 2)(x - 6)$

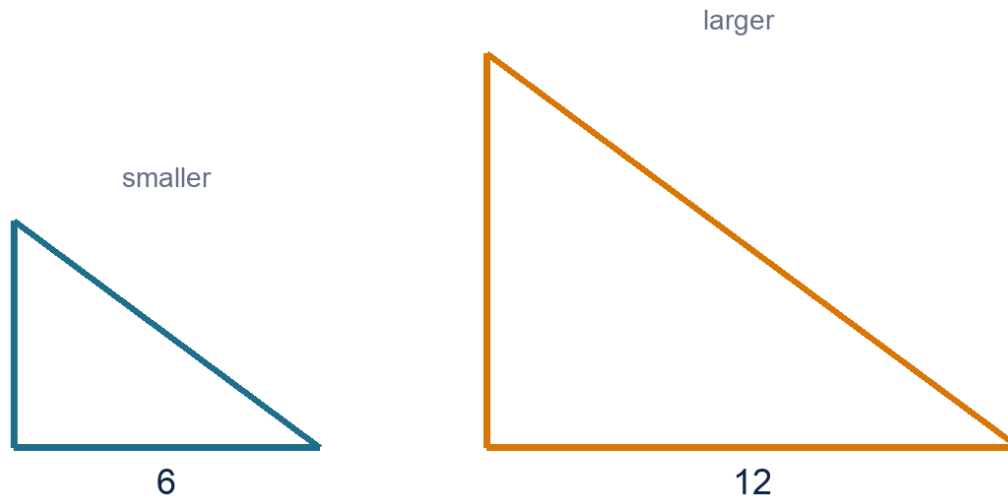


Image description: Data display for SAT Test 2 Math Module 1 Question 15.

15. Two triangles are similar. A side of the smaller triangle is 6, and the corresponding side of the larger triangle is 12. What is the scale factor from the smaller triangle to the larger triangle?

Response: _____

16. A trail is 3.5 miles long. What is its length in yards? (1 mile = 1,760 yards)

- A. 6,160
- B. 3,500
- C. 1,763
- D. 502

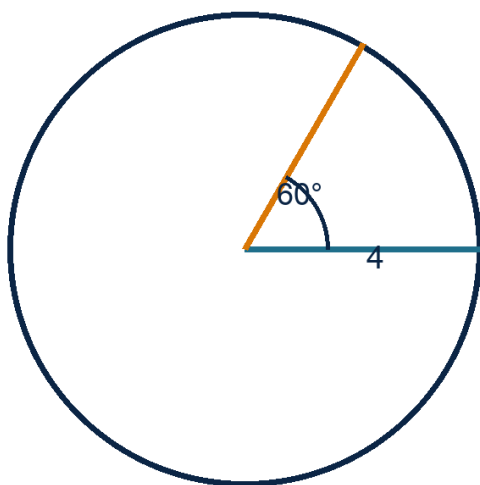


Image description: The diagram shows a circle with the indicated radius and central angle.

17. The diagram shows a circle with the indicated radius and central angle. What is the arc length divided by π ?

- A. $\frac{4}{3}$
- B. $\frac{2}{3}$
- C. $\frac{8}{3}$
- D. 4

18. The system $x + y = 1$ and $2x + 3y = 1$ has solution (x, y) . What is the value of y ?

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

19. A course grade is 60% from a score of 78 and 40% from a score of 95. What is the weighted average?

Response: _____

20. What is the greater solution to $x^2 - 2x - 8 = 0$?

- A. 8
- B. -4
- C. -2
- D. 4

21. The polynomial $p(x) = (x - 6)(x^2 + 5)$ is divisible by $x - c$. What is one possible value of c ?

- A. -6
- B. 6
- C. 5
- D. 11

22. A price of \$400 is increased by 25% and then decreased by 20%. What is the final price?

- A. 320
- B. 500
- C. 400
- D. 420

23. At a school concert, adult tickets cost \$11 and student tickets cost \$4. A total of 26 tickets brought in \$195. How many adult tickets were sold?

Response: _____

24. Which expression is equivalent to $5(2)^{(x + 3)}$?

- A. $5(5)^x$
- B. $8(2)^x$
- C. $40(2)^x$
- D. $15(2)^x$

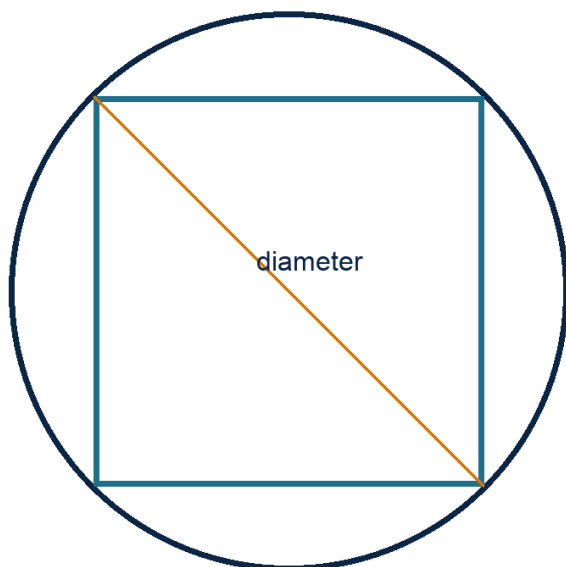


Image description: Data display for SAT Test 2 Math Module 1 Question 25.

25. A square is inscribed in a circle whose radius is $20\sqrt{2}/2$. What is the side length of the square?

- A. 10
- B. 40
- C. $20\sqrt{2}$
- D. 20

26. In the system $5x + 6y = 13$ and $hx + 12y = 27$, h is a constant. What value of h makes the system have no solution?

Response: _____

27. What is the solution to $\sqrt{x} = x - 2$?

- A. 4
- B. 5
- C. -4
- D. 2

Math Module 2

28. If $5x + 17 = 37$, what is the value of x ?

- A. 3
- B. 4
- C. 5
- D. 20

29. A community art studio charges a one-time materials fee of \$18 and \$12 for each class. Mina paid \$174 in total. How many classes did she take?

- A. 14
- B. 12
- C. 13
- D. $29/2$

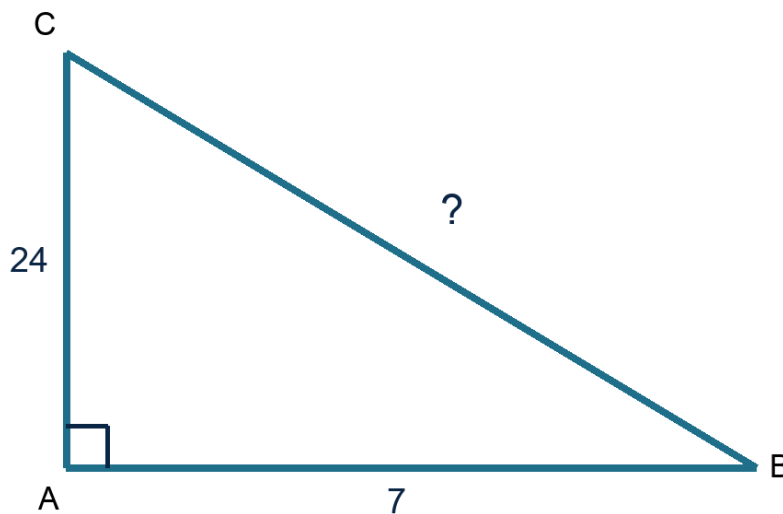


Image description: The diagram shows a right triangle.

30. The diagram shows a right triangle. What is the length of its hypotenuse?

- A. 31
- B. 24
- C. 22
- D. 25

31. The equation $y = 3x - 12$ relates x and y . Which equation expresses x in terms of y ?

- A. $x = 3y + 12$
- B. $x = (y + 12)/3$
- C. $x = y/3 - 12$
- D. $x = (y - 12)/3$

32. Which equation represents the line with slope -4 that passes through (2, -5)?

- A. $y = 3x - 4$
- B. $y = -4x - 3$
- C. $y = -4x + 3$
- D. $y = 4x + 3$

33. What is the distance between $(-2, -1)$ and $(1, 3)$ in the xy -plane?

Response: _____

34. Red and blue tiles are used in a ratio of 5:9. If 40 red tiles are used, how many blue tiles are used?

- A. 45
- B. 8
- C. 49
- D. 72

35. A club has \$33 already and earns \$4 for each item sold. What is the least number of items the club must sell to have at least \$97?

Response: _____

36. In a right triangle, an acute angle θ has opposite side 3 and hypotenuse 5. What is $\sin \theta$?

- A. $3/5$
- B. $4/5$
- C. $3/4$
- D. $5/3$

	Option X	Option Y	Total
Group A	12	14	26
Group B	17	13	30
Total	29	27	56

37. A participant is selected at random. What is the probability that the participant is in Group B?

- A. $15/28$
- B. $17/56$
- C. $27/56$
- D. $13/28$

38. The function $V(t) = 121 - 15t$ gives the volume of water, in liters, in a tank t minutes after draining begins. What does 15 represent?

- A. The tank loses 15 liters of water per minute.
- B. The tank initially contains 15 liters.
- C. The tank gains 15 liters per minute.
- D. The tank empties after 15 minutes.

39. The system $2x - y = 16$ and $x + 4y = 17$ has solution (x, y) . What is the value of y ?

Response: _____

40. An account starts with \$600 and grows by 4% each year with no additional deposits. Which expression gives the balance after 3 years?
- A. $600(1.04)^3$
B. $600 + 0.04(3)$
C. $600(1 + 4)^3$
D. $600(0.04)^3$
41. A course grade is 60% from a score of 70 and 40% from a score of 90. What is the weighted average?
- A. 20
B. 80
C. 82
D. 78
42. For what value of x does $f(x) = 2(x + 3)^2 - 4$ reach its minimum?
- A. -4
B. -2
C. 3
D. -3
43. In a random sample of 500 residents, 62% supported a park proposal. About how many of the town's 3,200 residents would be expected to support the proposal?
- A. 1,216
B. 2,700
C. 310
D. 1,984
44. At a school concert, adult tickets cost \$11 and student tickets cost \$8. A total of 31 tickets brought in \$296. How many adult tickets were sold?

Response: _____

45. The graph of $y = f(x)$ has an x -intercept at $(3, 0)$. What is the x -intercept of $y = f(x - 5)$?
- A. $(-2, 0)$
B. $(5, 0)$
C. $(8, 0)$
D. $(3, 5)$
46. Which expression is equivalent to $2(3)^{(x + 2)}$?
- A. $4(3)^x$
B. $18(3)^x$
C. $20(3)^x$
D. $2(5)^x$

47. Which table contains only solutions to $y > 3x + 2$?

- A. Table II: (1, 2); (3, 15); (5, 18)
- B. Table IV: (1, 6); (3, 15); (5, 15)
- C. Table I: (1, 6); (3, 15); (5, 18)
- D. Table III: (1, 6); (3, 8); (5, 18)

48. If $f(x) = 2x + 2$ and $g(x) = 2x + 1$, what is $f(g(3))$?

Response: _____

49. The function $f(x) = a(b)^x$ has $f(0) = 4$ and $f(2) = 16$, where a and b are positive constants. What is the value of b ?

- A. 2
- B. 5
- C. 3
- D. 4



smaller prism



linear factor 3

Image description: Data display for SAT Test 2 Math Module 2 Question 23.

50. Two right rectangular prisms are similar. The linear scale factor from the smaller prism to the larger prism is 3. If the smaller prism has volume 72, what is the volume of the larger prism?

- A. 2016
- B. 216
- C. 648
- D. 1944

51. The positive numbers x and y satisfy $x + y = 8$ and $xy = 15$. What is the larger value?

Response: _____

52. For $x \neq 2$, which expression is equivalent to $(x^2 - 4)/(x - 2) + 2$?

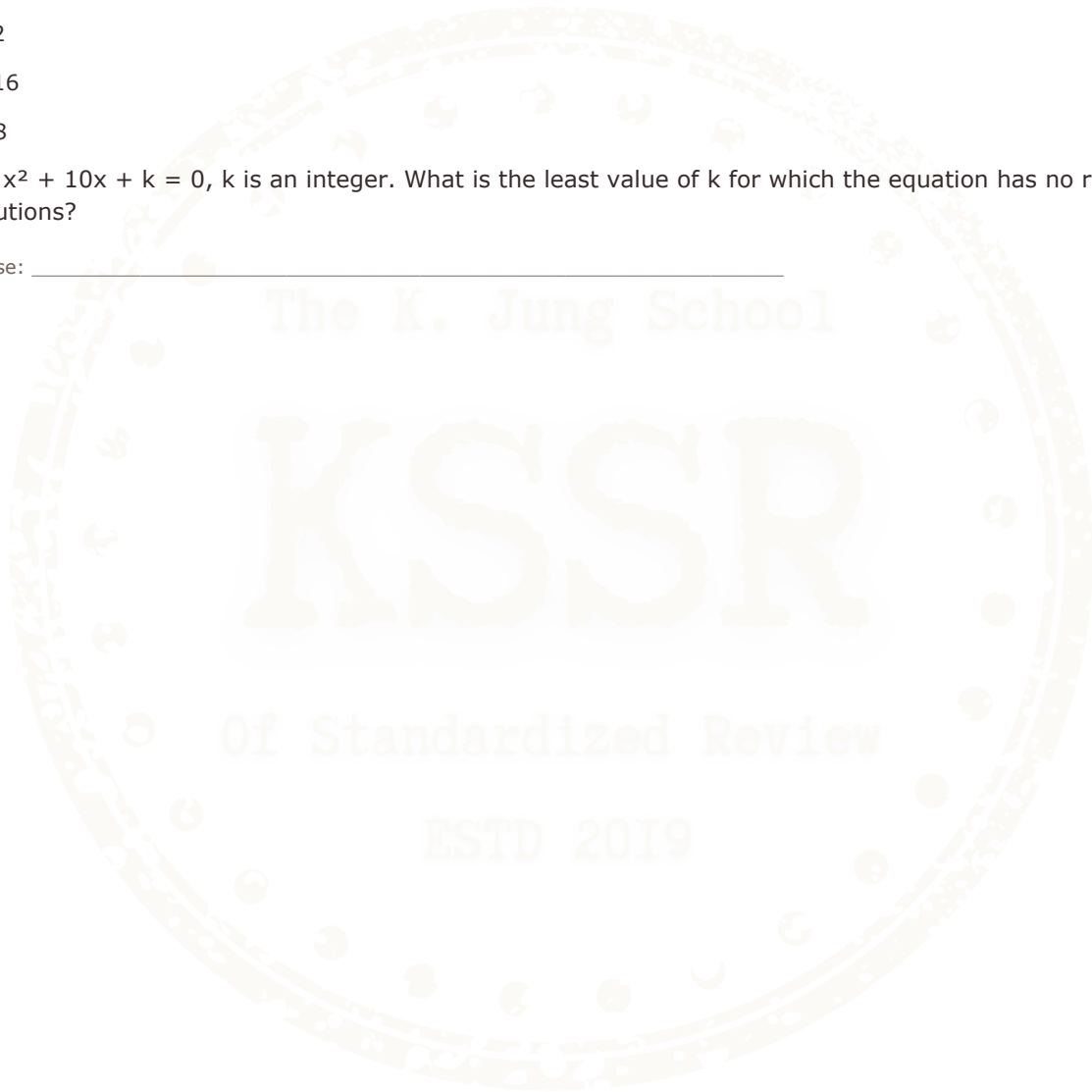
- A. $x - 4$
- B. $x + 4$
- C. $x^2 + 4$
- D. x

53. The zeros of $f(x)$ are 5, 1, and 2. If $g(x) = f(x - 2)$, what is the sum of the zeros of g ?

- A. 14
- B. 2
- C. 16
- D. 8

54. In $x^2 + 10x + k = 0$, k is an integer. What is the least value of k for which the equation has no real solutions?

Response: _____



ANSWER MATERIALS

UNOFFICIAL PRACTICE ANSWERS

Because the official SAT is adaptive, raw accuracy on this fixed KSSR bank cannot reproduce a College Board score. Use these answers and explanations for review after completing the entire test.

Reading and Writing answer key

Module 1

1. C - countervailing	2. A - convergent	3. D - indeterminate
4. B - contingent	5. C - anomalous	6. B - It condenses a complex social and psychological condition into a memorable concept.
7. D - It moves from resistance, to qualified human success, to a reminder of nature's continuing autonomy.	8. A - To explain how Darwin's notebooks reveal scientific reasoning as an iterative process	9. C - By noting that whether a result counts as a decisive refutation can depend on a scientific community's framework
10. B - Text 2 develops a consequence of Text 1 by distinguishing conceptual identity from material sameness.	11. D - Bell Burnell's analysis of an unusual radio signal helped establish observational evidence for neutron stars.	12. A - Bandung created a forum for diverse postcolonial states to articulate priorities beyond the Cold War's two-bloc framework.
13. C - The reality of his achievement abruptly conflicts with the exalted result he had anticipated.	14. B - The claim is supported because each giant planet shown has a shorter rotation period than both Earth and Mars.	15. D - The listed works by Ono precede Kosuth's One and Three Chairs, whereas Kawara's listed project begins later.
16. A - The interval from Curie's prize to McClintock's is longer than either later interval shown.	17. C - consider whether reduced carbonate availability affects the organism's capacity to build or maintain its structure	18. B - the contrast reflects different interactional demands in audience-facing and less public settings
19. A - is	20. D - had gained	21. B - provide
22. C - Kosuth's One and Three Chairs investigates competing forms of representation	23. B - in the past; his	24. D - successfully; instead,
25. A - while analyzing telescope records;	26. C - priorities:	27. B - statistics;
28. D - Nevertheless,	29. A - For instance,	30. C - However,
31. B - Although the twenty-nine participating governments held diverse ideological positions, they jointly addressed decolonization, cooperation, and peaceful coexistence.	32. D - By relating changing color patterns in maize kernels to chromosomal changes, McClintock developed evidence that genetic elements can move.	33. A - By presenting enactable and imaginative instructions as artworks, Grapefruit uses its form to question whether art requires a unique object made by the artist.

Module 2

34. B - underdetermined	35. D - attenuate	36. A - reify
37. C - provisional	38. B - incommensurable	39. C - It shows how the narrative arrangement invites readers to question the skeptic's authority.
40. A - It identifies parallel ambitions, adds an excluded perspective, and explains how the nested narratives complicate judgment.	41. D - To explain how Lawrence represents collective history while preserving its complexity	42. B - By agreeing about informational reach while distinguishing it from the support often supplied by strong ties
43. C - Text 2 extends Text 1 by considering how museums can alter the force of works that scrutinize them.	44. A - Rubin's measurements of galactic rotation strengthened the case for matter not accounted for by visible material.	45. D - Double consciousness names a socially produced tension between self-understanding and imposed racial judgment.
46. B - Historical knowledge informed an experimental modification that contributed to the development of an antimalarial treatment.	47. C - the increase from Saturn to Uranus is substantially larger than the increase from Jupiter to Saturn.	48. A - The increases are about 21.85 ppm, 30.95 ppm, and 44.53 ppm across the three successive intervals.
49. D - The largest ten-year increase shown occurred from 1950 to 1960.	50. B - task dexterity is confounded with group membership and could contribute to the performance difference	51. C - persistent important anomalies erode confidence in the framework's capacity to solve recognized problems
52. D - remains	53. A - could have determined	54. C - situates
55. B - Tu Youyou's team tested a low-temperature extraction	56. B - directly; rather,	57. B - acquaintances;
58. A - support for peaceful coexistence	59. C - material, such as	60. D - identified; consequently,
61. A - By contrast,	62. A - Accordingly,	63. C - Even so,
64. D - Because outer galactic material orbited faster than visible mass alone predicted, Rubin's measurements supported the inference that additional unseen mass affects galactic motion.	65. B - As decolonization produced newly independent states, UN membership expanded from 51 in 1945 to 127 in 1970.	66. A - By sequencing sixty captioned scenes rather than following one protagonist, Lawrence represents migration as a collective process encompassing varied experiences.

Math answer key

Module 1

1. A - 22	2. D - 5	3. B - 13
4. B - 64	5. C - 15	6. 24
7. A - $x = (y + 9)/4$	8. C - 5	9. B - $250(1.05)^2$
10. -4	11. B - 189	12. C - The tank loses 14 liters of water per minute.
13. B - $y = -2x - 4$	14. C - $(x - 2)(x + 6)$	15. 2
16. A - 6,160	17. A - $4/3$	18. A - -1
19. 84.8	20. D - 4	21. B - 6
22. C - 400	23. 13	24. C - $40(2)^x$
25. D - 20	26. 10	27. A - 4

Module 2

28. B - 4	29. C - 13	30. D - 25
31. B - $x = (y + 12)/3$	32. C - $y = -4x + 3$	33. 5
34. D - 72	35. 16	36. A - $3/5$
37. A - $15/28$	38. A - The tank loses 15 liters of water per minute.	39. 2
40. A - $600(1.04)^3$	41. D - 78	42. D - -3
43. D - 1,984	44. 16	45. C - (8, 0)
46. B - $18(3)^x$	47. C - Table I: (1, 6); (3, 15); (5, 18)	48. 16
49. A - 2	50. D - 1944	51. 5
52. B - $x + 4$	53. A - 14	54. 26



Answer explanations

Reading and Writing

Module 1

1. C - countervailing

Choice C is correct. In this context, "countervailing" supplies the meaning and logical relationship required by the surrounding sentences; the other choices do not fit the passage's precise claim.

2. A - convergent

Choice A is correct. In this context, "convergent" supplies the meaning and logical relationship required by the surrounding sentences; the other choices do not fit the passage's precise claim.

3. D - indeterminate

Choice D is correct. In this context, "indeterminate" supplies the meaning and logical relationship required by the surrounding sentences; the other choices do not fit the passage's precise claim.

4. B - contingent

Choice B is correct. In this context, "contingent" supplies the meaning and logical relationship required by the surrounding sentences; the other choices do not fit the passage's precise claim.

5. C - anomalous

Choice C is correct. In this context, "anomalous" supplies the meaning and logical relationship required by the surrounding sentences; the other choices do not fit the passage's precise claim.

6. B - It condenses a complex social and psychological condition into a memorable concept.

Choice B is correct. The passage or data display directly supports this conclusion: It condenses a complex social and psychological condition into a memorable concept. The other choices contradict, overstate, or are not established by the supplied evidence.

7. D - It moves from resistance, to qualified human success, to a reminder of nature's continuing autonomy.

Choice D is correct. The passage or data display directly supports this conclusion: It moves from resistance, to qualified human success, to a reminder of nature's continuing autonomy. The other choices contradict, overstate, or are not established by the supplied evidence.

8. A - To explain how Darwin's notebooks reveal scientific reasoning as an iterative process

Choice A is correct. The passage or data display directly supports this conclusion: To explain how Darwin's notebooks reveal scientific reasoning as an iterative process. The other choices contradict, overstate, or are not established by the supplied evidence.

9. C - By noting that whether a result counts as a decisive refutation can depend on a scientific community's framework
Choice C is correct. The passage or data display directly supports this conclusion: By noting that whether a result counts as a decisive refutation can depend on a scientific community's framework. The other choices contradict, overstate, or are not established by the supplied evidence.

10. B - Text 2 develops a consequence of Text 1 by distinguishing conceptual identity from material sameness.

Choice B is correct. The passage or data display directly supports this conclusion: Text 2 develops a consequence of Text 1 by distinguishing conceptual identity from material sameness. The other choices contradict, overstate, or are not established by the supplied evidence.

11. D - Bell Burnell's analysis of an unusual radio signal helped establish observational evidence for neutron stars.

Choice D is correct. The passage or data display directly supports this conclusion: Bell Burnell's analysis of an unusual radio signal helped establish observational evidence for neutron stars. The other choices contradict, overstate, or are not established by the supplied evidence.

12. A - Bandung created a forum for diverse postcolonial states to articulate priorities beyond the Cold War's two-bloc framework.

Choice A is correct. The passage or data display directly supports this conclusion: Bandung created a forum for diverse postcolonial states to articulate priorities beyond the Cold War's two-bloc framework. The other choices contradict, overstate, or are not established by the supplied evidence.

13. C - The reality of his achievement abruptly conflicts with the exalted result he had anticipated.

Choice C is correct. The passage or data display directly supports this conclusion: The reality of his achievement abruptly conflicts with the exalted result he had anticipated. The other choices contradict, overstate, or are not established by the supplied evidence.

14. B - The claim is supported because each giant planet shown has a shorter rotation period than both Earth and Mars.
Choice B is correct. The passage or data display directly supports this conclusion: The claim is supported because each giant planet shown has a shorter rotation period than both Earth and Mars. The other choices contradict, overstate, or are not established by the supplied evidence.

15. D - The listed works by Ono precede Kosuth's One and Three Chairs, whereas Kawara's listed project begins later.

Choice D is correct. The passage or data display directly supports this conclusion: The listed works by Ono precede Kosuth's One and Three Chairs, whereas Kawara's listed project begins later. The other choices contradict, overstate, or are not established by the supplied evidence.

16. A - The interval from Curie's prize to McClintock's is longer than either later interval shown.

Choice A is correct. The passage or data display directly supports this conclusion: The interval from Curie's prize to McClintock's is longer than either later interval shown. The other choices contradict, overstate, or are not established by the supplied evidence.

17. C - consider whether reduced carbonate availability affects the organism's capacity to build or maintain its structure
Choice C is correct. The passage or data display directly supports this conclusion: consider whether reduced carbonate availability affects the organism's capacity to build or maintain its structure The other choices contradict, overstate, or are not established by the supplied evidence.

18. B - the contrast reflects different interactional demands in audience-facing and less public settings

Choice B is correct. The passage or data display directly supports this conclusion: the contrast reflects different interactional demands in audience-facing and less public settings The other choices contradict, overstate, or are not established by the supplied evidence.

19. A - is

Choice A is correct. "is" completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

20. D - had gained

Choice D is correct. "had gained" completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

21. B - provide

Choice B is correct. "provide" completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

22. C - Kosuth's One and Three Chairs investigates competing forms of representation

Choice C is correct. "Kosuth's One and Three Chairs investigates competing forms of representation" completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

23. B - in the past; his

Choice B is correct. "in the past; his" completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

24. D - successfully; instead,

Choice D is correct. "successfully; instead," completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

25. A - while analyzing telescope records;

Choice A is correct. "while analyzing telescope records;" completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

26. C - priorities:

Choice C is correct. "priorities:" completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

27. B - statistics;

Choice B is correct. "statistics;" completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

28. D - Nevertheless,

Choice D is correct. The transition "Nevertheless," accurately signals the relationship between the ideas on either side of the blank.

29. A - For instance,

Choice A is correct. The transition "For instance," accurately signals the relationship between the ideas on either side of the blank.

30. C - However,

Choice C is correct. The transition "However," accurately signals the relationship between the ideas on either side of the blank.

31. B - Although the twenty-nine participating governments held diverse ideological positions, they jointly addressed decolonization, cooperation, and peaceful coexistence.

Choice B is correct. It uses the relevant information from the notes to satisfy the stated writing goal: Although the twenty-nine participating governments held diverse ideological positions, they jointly addressed decolonization, cooperation, and peaceful coexistence.

32. D - By relating changing color patterns in maize kernels to chromosomal changes, McClintock developed evidence that genetic elements can move.

Choice D is correct. It uses the relevant information from the notes to satisfy the stated writing goal: By relating changing color patterns in maize kernels to chromosomal changes, McClintock developed evidence that genetic elements can move.

33. A - By presenting enactable and imaginative instructions as artworks, Grapefruit uses its form to question whether art requires a unique object made by the artist.

Choice A is correct. It uses the relevant information from the notes to satisfy the stated writing goal: By presenting enactable and imaginative instructions as artworks, Grapefruit uses its form to question whether art requires a unique object made by the artist.

Module 2

34. B - underdetermined

Choice B is correct. In this context, "underdetermined" supplies the meaning and logical relationship required by the surrounding sentences; the other choices do not fit the passage's precise claim.

35. D - attenuate

Choice D is correct. In this context, "attenuate" supplies the meaning and logical relationship required by the surrounding sentences; the other choices do not fit the passage's precise claim.

36. A - reify

Choice A is correct. In this context, "reify" supplies the meaning and logical relationship required by the surrounding sentences; the other choices do not fit the passage's precise claim.

37. C - provisional

Choice C is correct. In this context, "provisional" supplies the meaning and logical relationship required by the surrounding sentences; the other choices do not fit the passage's precise claim.

38. B - incommensurable

Choice B is correct. In this context, "incommensurable" supplies the meaning and logical relationship required by the surrounding sentences; the other choices do not fit the passage's precise claim.

39. C - It shows how the narrative arrangement invites readers to question the skeptic's authority.

Choice C is correct. The passage or data display directly supports this conclusion: It shows how the narrative arrangement invites readers to question the skeptic's authority. The other choices contradict, overstate, or are not established by the supplied evidence.

40. A - It identifies parallel ambitions, adds an excluded perspective, and explains how the nested narratives complicate judgment.

Choice A is correct. The passage or data display directly supports this conclusion: It identifies parallel ambitions, adds an excluded perspective, and explains how the nested narratives complicate judgment. The other choices contradict, overstate, or are not established by the supplied evidence.

41. D - To explain how Lawrence represents collective history while preserving its complexity

Choice D is correct. The passage or data display directly supports this conclusion: To explain how Lawrence represents collective history while preserving its complexity. The other choices contradict, overstate, or are not established by the supplied evidence.

42. B - By agreeing about informational reach while distinguishing it from the support often supplied by strong ties

Choice B is correct. The passage or data display directly supports this conclusion: By agreeing about informational reach while distinguishing it from the support often supplied by strong ties. The other choices contradict, overstate, or are not established by the supplied evidence.

43. C - Text 2 extends Text 1 by considering how museums can alter the force of works that scrutinize them.

Choice C is correct. The passage or data display directly supports this conclusion: Text 2 extends Text 1 by considering how museums can alter the force of works that scrutinize them. The other choices contradict, overstate, or are not established by the supplied evidence.

44. A - Rubin's measurements of galactic rotation strengthened the case for matter not accounted for by visible material.

Choice A is correct. The passage or data display directly supports this conclusion: Rubin's measurements of galactic rotation strengthened the case for matter not accounted for by visible material. The other choices contradict, overstate, or are not established by the supplied evidence.

45. D - Double consciousness names a socially produced tension between self-understanding and imposed racial judgment.

Choice D is correct. The passage or data display directly supports this conclusion: Double consciousness names a socially produced tension between self-understanding and imposed racial judgment. The other choices contradict, overstate, or are not established by the supplied evidence.

46. B - Historical knowledge informed an experimental modification that contributed to the development of an antimalarial treatment.

Choice B is correct. The passage or data display directly supports this conclusion: Historical knowledge informed an experimental modification that contributed to the development of an antimalarial treatment. The other choices contradict, overstate, or are not established by the supplied evidence.

47. C - the increase from Saturn to Uranus is substantially larger than the increase from Jupiter to Saturn.

Choice C is correct. The passage or data display directly supports this conclusion: the increase from Saturn to Uranus is substantially larger than the increase from Jupiter to Saturn. The other choices contradict, overstate, or are not established by the supplied evidence.

48. A - The increases are about 21.85 ppm, 30.95 ppm, and 44.53 ppm across the three successive intervals.

Choice A is correct. The passage or data display directly supports this conclusion: The increases are about 21.85 ppm, 30.95 ppm, and 44.53 ppm across the three successive intervals. The other choices contradict, overstate, or are not established by the supplied evidence.

49. D - The largest ten-year increase shown occurred from 1950 to 1960.

Choice D is correct. The passage or data display directly supports this conclusion: The largest ten-year increase shown occurred from 1950 to 1960. The other choices contradict, overstate, or are not established by the supplied evidence.

50. B - task dexterity is confounded with group membership and could contribute to the performance difference
Choice B is correct. The passage or data display directly supports this conclusion: task dexterity is confounded with group membership and could contribute to the performance difference. The other choices contradict, overstate, or are not established by the supplied evidence.

51. C - persistent important anomalies erode confidence in the framework's capacity to solve recognized problems
Choice C is correct. The passage or data display directly supports this conclusion: persistent important anomalies erode confidence in the framework's capacity to solve recognized problems. The other choices contradict, overstate, or are not established by the supplied evidence.

52. D - remains

Choice D is correct. "remains" completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

53. A - could have determined

Choice A is correct. "could have determined" completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

54. C - situates

Choice C is correct. "situates" completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

55. B - Tu Youyou's team tested a low-temperature extraction

Choice B is correct. "Tu Youyou's team tested a low-temperature extraction" completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

56. B - directly; rather,

Choice B is correct. "directly; rather," completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

57. B - acquaintances;

Choice B is correct. "acquaintances;" completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

58. A - support for peaceful coexistence

Choice A is correct. "support for peaceful coexistence" completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

59. C - material, such as

Choice C is correct. "material, such as" completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

60. D - identified; consequently,

Choice D is correct. "identified; consequently," completes the sentence in a way that follows Standard English conventions and preserves the intended meaning.

61. A - By contrast,

Choice A is correct. The transition "By contrast," accurately signals the relationship between the ideas on either side of the blank.

62. A - Accordingly,

Choice A is correct. The transition "Accordingly," accurately signals the relationship between the ideas on either side of the blank.

63. C - Even so,

Choice C is correct. The transition "Even so," accurately signals the relationship between the ideas on either side of the blank.

64. D - Because outer galactic material orbited faster than visible mass alone predicted, Rubin's measurements supported the inference that additional unseen mass affects galactic motion.

Choice D is correct. It uses the relevant information from the notes to satisfy the stated writing goal: Because outer galactic material orbited faster than visible mass alone predicted, Rubin's measurements supported the inference that additional unseen mass affects galactic motion.

65. B - As decolonization produced newly independent states, UN membership expanded from 51 in 1945 to 127 in 1970.

Choice B is correct. It uses the relevant information from the notes to satisfy the stated writing goal: As decolonization produced newly independent states, UN membership expanded from 51 in 1945 to 127 in 1970.

66. A - By sequencing sixty captioned scenes rather than following one protagonist, Lawrence represents migration as a collective process encompassing varied experiences.

Choice A is correct. It uses the relevant information from the notes to satisfy the stated writing goal: By sequencing sixty captioned scenes rather than following one protagonist, Lawrence represents migration as a collective process encompassing varied experiences.

Math

Module 1

1. A - 22

A - Median of a data set. After ordering the five values, the middle value is 22.

2. D - 5
D - Rates. Time equals distance divided by speed: $40/8 = 5$ hours.
3. B - 13
B - Pythagorean theorem. By the Pythagorean theorem, $c = \sqrt{5^2 + 12^2} = 13$.
4. B - 64
B - Ratios and proportions. The scale factor is $32/4 = 8$. Therefore the number of blue tiles is $8(8) = 64$.
5. C - 15
C - Linear equations in context. The equation $18 + 12c = 198$ gives $12c = 180$, so $c = 15$.
6. 24
24 - Using a line of best fit. Substitute $x = 7$ into the model: $y = 2(7) + 10 = 24$.
7. A - $x = (y + 9)/4$
A - Rearranging formulas. Add 9 to both sides and divide by 4: $x = (y + 9)/4$.
8. C - 5
C - Slope of a line. The slope is $(4 - (-6))/(1 - (-1)) = 5$.
9. B - $250(1.05)^2$
B - Exponential growth models. A 5% annual increase uses growth factor $1 + 5/100 = 1.05$, giving $250(1.05)^2$.
10. -4
-4 - Linear functions represented by tables. The output changes by -2 when x increases by 1, so $f(x) = -2x + 4$. Thus $f(4) = -4$.
11. B - 189
B - Evaluating exponential functions. Substitute $t = 3$: $f(3) = 7(3)^3 = 189$.
12. C - The tank loses 14 liters of water per minute.
C - Interpreting linear models. The coefficient of t is -14, so the volume decreases by 14 liters each minute.
13. B - $y = -2x - 4$
B - Equation of a line. Using $y = mx + b$ and the given point gives $b = -4$, so the equation is $y = -2x - 4$.
14. C - $(x - 2)(x + 6)$
C - Factoring quadratic expressions. The two numbers multiply to -12 and add to 4; they are -2 and 6. Thus the factorization is $(x - 2)(x + 6)$.
15. 2
2 - Similar triangles. The scale factor is corresponding large side divided by small side: $12/6 = 2$.
16. A - 6,160
A - Unit conversion. Multiply by 1,760 yards per mile: $3.5(1,760) = 6,160$ yards.
17. A - $4/3$
A - Arc length. Arc length = $(60/360)(2\pi(4))$, so the arc length divided by π is $4/3$.
18. A - -1
A - Systems of linear equations. Eliminating one variable gives the solution $(2, -1)$; therefore $y = -1$.
19. 84.8
84.8 - Weighted averages. The weighted average is $0.6(78) + 0.4(95) = 84.8$.
20. D - 4
D - Solving quadratic equations. The equation factors as $(x - 4)(x + 2) = 0$, so the solutions are 4 and -2. The greater solution is 4.
21. B - 6
B - Polynomial factors and zeros. Because $x - 6$ is a factor, $p(6) = 0$. Therefore $c = 6$.
22. C - 400
C - Successive percent change. Apply the changes successively: $400(1 + 25/100)(1 - 20/100) = 400$.
23. 13
13 - Systems of linear equations in context. Let a and s be the ticket counts. From $a + s = 26$ and $11a + 4s = 195$, elimination gives $a = 13$.
24. C - $40(2)^x$
C - Equivalent exponential expressions. Use $b^x(x + 3) = b^x b^3$. The coefficient is $5(2^3) = 40$.
25. D - 20
D - Squares inscribed in circles. The square's diagonal is the circle's diameter: $2(20\sqrt{2}/2) = 20\sqrt{2}$. Since diagonal = side $\sqrt{2}$, the side length is 20.
26. 10
10 - No-solution systems. For parallel distinct lines, the x - and y -coefficients must have the same factor. The factor is 2, so $h = 5(2) = 10$; the constants are not proportional.
27. A - 4
A - Radical equations. Square both sides, solve the resulting quadratic, and check candidates in the original equation. Only $x = 4$ is valid.

Module 2

28. B - 4
B - Linear equations in one variable. Subtract 17 on both sides, then divide by 5. This gives $x = 4$.

29. C - 13
C - Linear equations in context. The equation $18 + 12c = 174$ gives $12c = 156$, so $c = 13$.
30. D - 25
D - Pythagorean theorem. By the Pythagorean theorem, $c = \sqrt{7^2 + 24^2} = 25$.
31. B - $x = (y + 12)/3$
B - Rearranging formulas. Add 12 to both sides and divide by 3: $x = (y + 12)/3$.
32. C - $y = -4x + 3$
C - Equation of a line. Using $y = mx + b$ and the given point gives $b = 3$, so the equation is $y = -4x + 3$.
33. 5
5 - Distance in the coordinate plane. The distance is $\sqrt{(1 - (-2))^2 + (3 - (-1))^2} = \sqrt{3^2 + 4^2} = 5$.
34. D - 72
D - Ratios and proportions. The scale factor is $40/5 = 8$. Therefore the number of blue tiles is $9(8) = 72$.
35. 16
16 - Linear inequalities in context. Solve $33 + 4n \geq 97$. This gives $n \geq 16$, so the least possible number is 16.
36. A - $3/5$
A - Trigonometric ratios. $\sin \theta = \text{opposite/hypotenuse} = 3/5$.
37. A - $15/28$
A - Probability from a two-way table. There are 30 participants in Group B out of 56 total, so the probability is $15/28$.
38. A - The tank loses 15 liters of water per minute.
A - Interpreting linear models. The coefficient of t is -15 , so the volume decreases by 15 liters each minute.
39. 2
2 - Systems of linear equations. Eliminating one variable gives the solution $(9, 2)$; therefore $y = 2$.
40. A - $600(1.04)^3$
A - Exponential growth models. A 4% annual increase uses growth factor $1 + 4/100 = 1.04$, giving $600(1.04)^3$.
41. D - 78
D - Weighted averages. The weighted average is $0.6(70) + 0.4(90) = 78$.
42. D - -3
D - Vertex form of quadratic functions. The function is in vertex form $a(x - h)^2 + k$, so its minimum occurs at $x = -3$.
43. D - 1,984
D - Inference from a random sample. Apply the sample proportion to the population: 62% of 3,200 is approximately 1,984.
44. 16
16 - Systems of linear equations in context. Let a and s be the ticket counts. From $a + s = 31$ and $11a + 8s = 296$, elimination gives $a = 16$.
45. C - $(8, 0)$
C - Function transformations. Replacing x by $x - 5$ shifts the graph 5 units right, so the intercept moves to $(8, 0)$.
46. B - $18(3)^x$
B - Equivalent exponential expressions. Use $b^{x+2} = b^x b^2$. The coefficient is $2(3^2) = 18$.
47. C - Table I: $(1, 6)$; $(3, 15)$; $(5, 18)$
C - Linear inequalities represented by tables. In Table I, each y -value is greater than $3x + 2$ for its corresponding x -value.
48. 16
16 - Function composition. First, $g(3) = 7$. Then $f(7) = 2(7) + 2 = 16$.
49. A - 2
A - Parameters of exponential functions. Since $f(0) = a = 4$, $f(2) = 4b^2 = 16$. Thus $b^2 = 4$, and $b = 2$.
50. D - 1944
D - Volume and similarity. Volumes scale by the cube of the linear factor: $72(3^3) = 1944$.
51. 5
5 - Nonlinear systems. The numbers are roots of $t^2 - 8t + 15 = 0$, which factors as $(t - 3)(t - 5)$. The larger value is 5.
52. B - $x + 4$
B - Equivalent rational expressions. Factor $x^2 - 4 = (x - 2)(x + 2)$. Cancel $x - 2$, then add 2, giving $x + 4$.
53. A - 14
A - Transformations and polynomial zeros. Each zero shifts by 2. The new sum is $8 + 3(2) = 14$.
54. 26
26 - Discriminant and number of solutions. No real solutions require $b^2 - 4k < 0$. Thus $k > 25$, and the least integer is 26.