

DIGITAL SAT-STYLE

Full-Length Practice Test

SAT MOCK SIX - 2026 FORMAT

Plan a complete practice session.

Reading and Writing: 54 questions, 64 minutes

10-minute break

Math: 44 questions, 70 minutes

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GENERAL DIRECTIONS

- Work on only one module at a time. Do not continue to another module until the allotted time has ended.
- Reading and Writing: 2 modules, 27 questions each, 32 minutes per module.
- Break: Take a 10-minute break after Reading and Writing Module 2.
- Math: 2 modules, 22 questions each, 35 minutes per module. A calculator is permitted throughout Math.
- Multiple-choice questions: Select one answer choice. For student-produced response questions, write or enter your answer in the space provided.
- Adaptive-test note: The real digital SAT selects the difficulty of Module 2 based on Module 1 performance. This printable mock uses one fixed Module 2 at a moderately challenging level.
- Scoring: Use the answer key at the end. Official SAT scores are adaptive and equated, so raw scores from this booklet do not convert precisely to a 400-1600 score.

Name: _____ Date: _____

Reading and Writing Answer Sheet

Module 1

- | | | | | |
|----|-----|-----|-----|-----|
| 1 | (A) | (B) | (C) | (D) |
| 2 | (A) | (B) | (C) | (D) |
| 3 | (A) | (B) | (C) | (D) |
| 4 | (A) | (B) | (C) | (D) |
| 5 | (A) | (B) | (C) | (D) |
| 6 | (A) | (B) | (C) | (D) |
| 7 | (A) | (B) | (C) | (D) |
| 8 | (A) | (B) | (C) | (D) |
| 9 | (A) | (B) | (C) | (D) |
| 10 | (A) | (B) | (C) | (D) |
| 11 | (A) | (B) | (C) | (D) |
| 12 | (A) | (B) | (C) | (D) |
| 13 | (A) | (B) | (C) | (D) |
| 14 | (A) | (B) | (C) | (D) |
| 15 | (A) | (B) | (C) | (D) |
| 16 | (A) | (B) | (C) | (D) |
| 17 | (A) | (B) | (C) | (D) |
| 18 | (A) | (B) | (C) | (D) |
| 19 | (A) | (B) | (C) | (D) |
| 20 | (A) | (B) | (C) | (D) |
| 21 | (A) | (B) | (C) | (D) |
| 22 | (A) | (B) | (C) | (D) |
| 23 | (A) | (B) | (C) | (D) |
| 24 | (A) | (B) | (C) | (D) |
| 25 | (A) | (B) | (C) | (D) |
| 26 | (A) | (B) | (C) | (D) |
| 27 | (A) | (B) | (C) | (D) |

Module 2

- | | | | | |
|----|-----|-----|-----|-----|
| 1 | (A) | (B) | (C) | (D) |
| 2 | (A) | (B) | (C) | (D) |
| 3 | (A) | (B) | (C) | (D) |
| 4 | (A) | (B) | (C) | (D) |
| 5 | (A) | (B) | (C) | (D) |
| 6 | (A) | (B) | (C) | (D) |
| 7 | (A) | (B) | (C) | (D) |
| 8 | (A) | (B) | (C) | (D) |
| 9 | (A) | (B) | (C) | (D) |
| 10 | (A) | (B) | (C) | (D) |
| 11 | (A) | (B) | (C) | (D) |
| 12 | (A) | (B) | (C) | (D) |
| 13 | (A) | (B) | (C) | (D) |
| 14 | (A) | (B) | (C) | (D) |
| 15 | (A) | (B) | (C) | (D) |
| 16 | (A) | (B) | (C) | (D) |
| 17 | (A) | (B) | (C) | (D) |
| 18 | (A) | (B) | (C) | (D) |
| 19 | (A) | (B) | (C) | (D) |
| 20 | (A) | (B) | (C) | (D) |
| 21 | (A) | (B) | (C) | (D) |
| 22 | (A) | (B) | (C) | (D) |
| 23 | (A) | (B) | (C) | (D) |
| 24 | (A) | (B) | (C) | (D) |
| 25 | (A) | (B) | (C) | (D) |
| 26 | (A) | (B) | (C) | (D) |
| 27 | (A) | (B) | (C) | (D) |

Math Answer Sheet

Module 1

- 1

(A)

(B)

(C)

(D)
- 2

(A)

(B)

(C)

(D)
- 3

(A)

(B)

(C)

(D)
- 4

(A)

(B)

(C)

(D)
- 5

(A)

(B)

(C)

(D)
- 6

(A)

(B)

(C)

(D)
- 7

(A)

(B)

(C)

(D)
- 8

(A)

(B)

(C)

(D)
- 9

(A)

(B)

(C)

(D)
- 10

(A)

(B)

(C)

(D)
- 11

(A)

(B)

(C)

(D)
- 12

(A)

(B)

(C)

(D)
- 13

(A)

(B)

(C)

(D)
- 14

(A)

(B)

(C)

(D)
- 15

(A)

(B)

(C)

(D)
- 16

(A)

(B)

(C)

(D)
- 17

(A)

(B)

(C)

(D)
- 18

Response:
- 19

Response:
- 20

Response:
- 21

Response:
- 22

Response:

Module 2

- 1

(A)

(B)

(C)

(D)
- 2

(A)

(B)

(C)

(D)
- 3

(A)

(B)

(C)

(D)
- 4

(A)

(B)

(C)

(D)
- 5

(A)

(B)

(C)

(D)
- 6

(A)

(B)

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- 7

(A)

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- 14

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- 15

(A)

(B)

(C)

(D)
- 16

(A)

(B)

(C)

(D)
- 17

Response:
- 18

Response:
- 19

Response:
- 20

Response:
- 21

Response:
- 22

Response:

Reading and Writing

27 QUESTIONS | 32 MINUTES

The questions in this section address important reading and writing skills. Read each passage and question carefully, and choose the best answer. All questions have four answer choices and one best answer.

1

According to the project summary, the inscription is ambiguous: one phrase could refer either to a person or to a place.

As used in the text, “ambiguous” most nearly means

- A) open to more than one interpretation
- B) easy to translate
- C) extremely detailed
- D) deliberately false

2

According to the project summary, for decades, a complete explanation of the phenomenon remained elusive.

As used in the text, “elusive” most nearly means

- A) difficult to find or achieve
- B) difficult to obtain
- C) widely publicized
- D) easy to repeat

3

According to the project summary, the coating was not uniform; some areas were much thicker than others.

As used in the text, “uniform” most nearly means

- A) make the result less certain
- B) permanent
- C) transparent
- D) consistent throughout

4

According to the project summary, the debate shifted when researchers introduced empirical evidence from field measurements.

As used in the text, “empirical” most nearly means

- A) based on observation or experiment
- B) derived from opinion
- C) based on observation
- D) expressed symbolically

5

Researchers studying river barriers measured fish movement. They found that fish crossed low barriers more frequently after openings were added. Because the study was observational, other factors may also have contributed to the pattern.

Which choice best states the main idea of the text?

- A) The study proves that river barriers is the only factor affecting fish movement.
- B) Openings may make low barriers easier for fish to cross.
- C) The authors recommend ending all future research on river barriers.
- D) The researchers found no relationship involving river barriers.

6

Researchers studying community compost measured landfill waste. They found that participating households sent less food waste to landfill. The authors caution that a larger study is needed before drawing a universal conclusion.

Which choice best states the main idea of the text?

- A) Community composting can reduce household food waste sent to landfill.
- B) The researchers found no relationship involving community compost.
- C) The authors recommend ending all future research on community compost.
- D) The study proves that community compost is the only factor affecting landfill waste.

7

Researchers studying crop rotation measured soil nitrogen. They found that fields planted with legumes before wheat had higher nitrogen levels. The researchers note that the study did not control for every environmental difference.

Which choice best states the main idea of the text?

- A) The researchers found no relationship involving crop rotation.
- B) The authors recommend ending all future research on crop rotation.
- C) The study proves that crop rotation is the only factor affecting soil nitrogen.
- D) Including legumes in a rotation may increase nitrogen available to later crops.

8

Researchers studying sleep schedules measured reaction time. They found that participants with consistent sleep times responded faster than those with irregular schedules. The team recommends repeating the work in additional locations.

Which choice best states the main idea of the text?

- A) Consistent sleep timing may be associated with faster responses.
- B) The authors recommend ending all future research on sleep schedules.
- C) The researchers found no relationship involving sleep schedules.
- D) The study proves that sleep schedules is the only factor affecting reaction time.

9

A geologist compared two layers of volcanic ash. The layers had nearly identical mineral compositions and were found at sites hundreds of kilometers apart. The authors state that further testing would be useful.

Which inference is best supported by the text?

- A) The ash layers formed at different times.
- B) Mineral composition cannot help identify eruptions.
- C) The layers may have come from the same large eruption.
- D) The sites were once adjacent.

10

Engineers tested a coating on metal panels. Coated panels corroded more slowly in salt water, but the coating cracked when the panels were repeatedly bent. The pattern was observed more than once.

Which conclusion is best supported by the text?

- A) Bending makes uncoated metal stronger.
- B) The coating may protect rigid metal surfaces better than frequently flexed ones.
- C) The coating completely prevents corrosion.
- D) Salt water repairs cracks in the coating.

11

Researchers found that a lizard species was active at dawn in open habitats but remained active later in shaded habitats. The pattern was observed more than once.

Which inference is best supported by the text?

- A) The lizards avoid all open habitats.
- B) Shade may allow the lizards to remain active later in the day.
- C) The lizards feed only after noon.
- D) Dawn temperatures are always lower in shade.

12

A study recorded the following results:

Morning: 60

Afternoon: 67

Evening: 52

Which choice is best supported by the data?

- A) Afternoon had a lower average visitors than Morning.
- B) Afternoon had the highest average visitors.
- C) Morning and Afternoon had identical average visitors.
- D) Evening had the highest average visitors.

13

A study recorded the following results:

No reminder: 64

Email reminder: 74

Text reminder: 57

Which choice is best supported by the data?

- A) Email reminder had the highest appointments kept (%).
- B) Email reminder had a lower appointments kept (%) than No reminder.
- C) No reminder and Email reminder had identical appointments kept (%).
- D) Text reminder had the highest appointments kept (%).

14

A study recorded the following results:

Standard soil: 36

Compost mix: 49

Sand mix: 29

Which choice is best supported by the data?

- A) Sand mix had the highest plant height (cm).
- B) Compost mix had a lower plant height (cm) than Standard soil.
- C) Compost mix had the highest plant height (cm).
- D) Standard soil and Compost mix had identical plant height (cm).

15

The new procedure is faster, less expensive, and _____ than the method it replaced.

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

- A) having more reliability
- B) it reliably works
- C) reliability is greater
- D) more reliable

16

The first survey included only coastal sites ____ the second survey also examined inland areas.

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

- A) :
- B) [no punctuation]
- C) ,
- D) ;

17

Walking through the restored garden, ____.

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

- A) there were labels beside each plant
- B) several newly planted trees were noticed
- C) the visitors noticed several newly planted trees
- D) the garden's paths appeared unusually wide

18

Each of the sculptures has ____ own protective case.

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

- A) it's
- B) there
- C) their
- D) its

19

The samples were dried overnight. ____ they were weighed and sealed in containers.

Which choice completes the text with the most logical transition?

- A) For instance,
- B) Subsequently,
- C) Nevertheless,
- D) Likewise,

20

The archive digitized thousands of photographs. ____ it created detailed descriptions for each image.

Which choice completes the text with the most logical transition?

- A) In contrast,
- B) However,
- C) Moreover,
- D) Otherwise,

21

Some desert plants store water in specialized tissues. ____ many cacti retain water in thick stems.

Which choice completes the text with the most logical transition?

- A) Consequently,
- B) For example,
- C) Instead,
- D) Nevertheless,

22

A student has taken the following notes:

- Botanist Lina Ortega cataloged 340 alpine plant specimens.
- Her field notes include precise elevation data for each specimen.

The student wants to highlight both the scale and the scientific detail of Ortega's work.

Which choice most effectively uses information from the notes to accomplish this goal?

- A) Although botanist lina ortega cataloged 340 alpine plant specimens, no information is available about its later history.
- B) Botanist Lina Ortega cataloged 340 alpine plant specimens, and her field notes include precise elevation data for each specimen.
- C) Her field notes include precise elevation data for each specimen.
- D) Botanist Lina Ortega cataloged 340 alpine plant specimens.

23

A student has taken the following notes:

- The city installed its first protected bicycle lane in 2018.
- By 2025, the network included 74 kilometers of protected lanes.

The student wants to illustrate the rapid expansion of the protected bicycle network.

Which choice most effectively uses information from the notes to accomplish this goal?

- A) By 2025, the network included 74 kilometers of protected lanes.
- B) Although the city installed its first protected bicycle lane in 2018, no information is available about its later history.
- C) The city installed its first protected bicycle lane in 2018, and by 2025, the network included 74 kilometers of protected lanes.
- D) The city installed its first protected bicycle lane in 2018.

24

A student has taken the following notes:

- The mural covers the entire east wall of the station.
- More than 200 local residents helped paint it.

The student wants to highlight both the mural's large scale and its community involvement.

Which choice most effectively uses information from the notes to accomplish this goal?

- A) More than 200 local residents helped paint it.
- B) The mural covers the entire east wall of the station.
- C) The mural covers the entire east wall of the station, and more than 200 local residents helped paint it.
- D) Although the mural covers the entire east wall of the station, no information is available about its later history.

25

The lake's water level varies naturally from year to year. Recently, however, the decline has been unusually rapid. Researchers are studying both reduced rainfall and increased water withdrawals as possible causes.

The word "however" primarily signals that the text is about to

- A) restate the first sentence in simpler terms
- B) contrast the recent decline with ordinary year-to-year variation
- C) give an example of a normal increase
- D) reject both proposed causes

26

Some early maps place the island several kilometers too far east. Navigational instruments of the period were less accurate at measuring longitude than latitude. The error therefore reflects a common technical limitation rather than carelessness.

Which choice best describes the organization of the text?

- A) It identifies an error, explains its likely cause, and interprets its significance.
- B) It presents two unrelated discoveries and compares their dates.
- C) It argues for a claim and then withdraws it.
- D) It lists several instruments without explaining their use.

27

Many city roofs absorb solar energy and become hot. Reflective roof coatings, by contrast, return more sunlight to the atmosphere. In one trial, rooms beneath coated roofs remained several degrees cooler.

The second sentence mainly serves to

- A) introduce a contrast that helps explain the trial's result
- B) define a term used only in the final sentence
- C) provide a historical example unrelated to the trial
- D) question the accuracy of the trial

Reading and Writing

27 QUESTIONS | 32 MINUTES

The questions in this section address important reading and writing skills. Read each passage and question carefully, and choose the best answer. All questions have four answer choices and one best answer.

1

According to the project summary, the proposed explanation is plausible, but additional evidence is needed before it can be accepted.

As used in the text, “plausible” most nearly means

- A) seemingly reasonable
- B) known to be false
- C) too complex to describe
- D) make the result less certain

2

According to the project summary, the material’s flexibility is intrinsic rather than produced by an added coating.

As used in the text, “intrinsic” most nearly means

- A) belonging naturally to something
- B) naturally inherent
- C) temporary
- D) commercially valuable

3

According to the project summary, the analysis treats the three stages as discrete processes, even though they sometimes overlap.

As used in the text, “discrete” most nearly means

- A) nearly identical
- B) make the result less certain
- C) continuously changing
- D) separate and distinct

4

According to the project summary, the second experiment was designed to validate the first study’s results.

As used in the text, “validate” most nearly means

- A) make the result less certain
- B) confirm the soundness of
- C) make easier to explain
- D) replace with a theory

5

Researchers studying trail signs measured hiker behavior. They found that more hikers stayed on marked paths after new signs were installed. The team recommends repeating the work in additional locations.

Which choice best states the main idea of the text?

- A) The researchers found no relationship involving trail signs.
- B) Clearer signs may encourage hikers to remain on marked paths.
- C) The study proves that trail signs is the only factor affecting hiker behavior.
- D) The authors recommend ending all future research on trail signs.

6

Researchers studying wetland restoration measured bird diversity. They found that restored sites gained species over five years but still had fewer species than undisturbed wetlands. Because the study was observational, other factors may also have contributed to the pattern.

Which choice best states the main idea of the text?

- A) The study proves that wetland restoration is the only factor affecting bird diversity.
- B) The researchers found no relationship involving wetland restoration.
- C) The authors recommend ending all future research on wetland restoration.
- D) Restoration improved diversity without fully recreating undisturbed conditions.

7

Researchers studying coastal dunes measured storm erosion. They found that dunes planted with native grasses lost less sand. The authors caution that a larger study is needed before drawing a universal conclusion.

Which choice best states the main idea of the text?

- A) Native grasses may help dunes resist storm erosion.
- B) The authors recommend ending all future research on coastal dunes.
- C) The study proves that coastal dunes is the only factor affecting storm erosion.
- D) The researchers found no relationship involving coastal dunes.

8

A botanist observed that a mountain flower opened earlier on warmer mornings. On cool mornings, the same flowers remained closed until midday.

Which conclusion is best supported by the text?

- A) The timing of the flower's opening is influenced by morning temperature.
- B) The flower can open only at midday.
- C) Warm mornings prevent the flower from producing seeds.
- D) The flower grows only at high elevations.

9

A study of two bird species found that both ate the same insects in spring. In summer, one species shifted to fruit while the other continued eating insects.

Which inference is best supported by the text?

- A) Fruit is unavailable in spring.
- B) Neither species eats insects in summer.
- C) The species' diets overlap more in spring than in summer.
- D) The species live in different habitats.

10

A software team reduced the number of menu options in an app. New users completed a task faster, while experienced users showed little change.

Which conclusion is best supported by the text?

- A) Simplifying the menu particularly benefited new users.
- B) The app no longer included advanced tools.
- C) Experienced users completed the task more slowly.
- D) New users preferred more menu options.

11

A historian found that merchants used two spellings of the same city's name in letters written during the 1700s. Both spellings appeared in documents from the same decade. The authors state that further testing would be useful.

Which inference is best supported by the text?

- A) The city's name did not yet have a single standardized spelling.
- B) The merchants lived in different countries.
- C) One spelling was used only in legal documents.
- D) The city changed its official name during the decade.

12

A theater replaced printed programs with a mobile version. Paper use declined, but some audience members requested printed summaries at the entrance. The authors state that further testing would be useful.

Which conclusion is best supported by the text?

- A) Printed programs were more expensive than tickets.
- B) All audience members preferred the mobile program.
- C) The mobile program increased ticket sales.
- D) The mobile program reduced paper use but did not meet every audience member's preference.

13

A study recorded the following results:

Standard soil: 58

Compost mix: 70

Sand mix: 54

Which choice is best supported by the data?

- A) Compost mix had the highest plant height (cm).
- B) Compost mix had a lower plant height (cm) than Standard soil.
- C) Sand mix had the highest plant height (cm).
- D) Standard soil and Compost mix had identical plant height (cm).

14

A study recorded the following results:

No shade: 63

Partial shade: 73

Full shade: 58

Which choice is best supported by the data?

- A) Full shade had the highest seedling survival (%).
- B) Partial shade had the highest seedling survival (%).
- C) No shade and Partial shade had identical seedling survival (%).
- D) Partial shade had a lower seedling survival (%) than No shade.

15

A study recorded the following results:

Control: 56

Low dose: 65

High dose: 48

Which choice is best supported by the data?

- A) Low dose had a lower average activity score than Control.
- B) Control and Low dose had identical average activity score.
- C) Low dose had the highest average activity score.
- D) High dose had the highest average activity score.

16

Each of the sculptures has ____ own protective case.

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

- A) its
- B) there
- C) their
- D) it's

17

The set of laboratory samples ____ stored in the archive's climate-controlled room.

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

- A) have been
- B) are
- C) were being
- D) is

18

The two ____ recommendations were included in the final report.

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

- A) scientist's
- B) scientists'
- C) scientists
- D) scientists's

19

The team tested three materials: recycled glass, compressed fiber, ____ a plant-based plastic.

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

- A) and,
- B) and
- C) or,
- D) but

20

By the time the research vessel returned to port, the crew ____ more than two hundred water samples.

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

- A) collects
- B) will collect
- C) had collected
- D) is collecting

21

The city added frequent service on the route. ____ average waiting times declined.

Which choice completes the text with the most logical transition?

- A) For example,
- B) Therefore,
- C) Meanwhile,
- D) However,

22

The first prototype was lightweight and inexpensive. ____ it failed several durability tests.

Which choice completes the text with the most logical transition?

- A) Similarly,
- B) Therefore,
- C) However,
- D) For example,

23

The new coating resisted saltwater corrosion. ____ it cracked after repeated bending.

Which choice completes the text with the most logical transition?

- A) Therefore,
- B) Similarly,
- C) For example,
- D) Nevertheless,

24

A student has taken the following notes:

- The Northfield Observatory opened in 1912.
- Its original telescope is still used for public viewing nights.

The student wants to emphasize both the observatory's age and the continued use of its original equipment.

Which choice most effectively uses information from the notes to accomplish this goal?

- A) Although the northfield observatory opened in 1912, no information is available about its later history.
- B) The Northfield Observatory opened in 1912, and its original telescope is still used for public viewing nights.
- C) The Northfield Observatory opened in 1912.
- D) Its original telescope is still used for public viewing nights.

25

A student has taken the following notes:

- Composer Eli Moran wrote the suite in 1936.
- The suite was not performed publicly until 1984.

The student wants to stress the long delay between composition and public performance.

Which choice most effectively uses information from the notes to accomplish this goal?

- A) Composer Eli Moran wrote the suite in 1936.
- B) Although composer eli moran wrote the suite in 1936, no information is available about its later history.
- C) Composer Eli Moran wrote the suite in 1936, and the suite was not performed publicly until 1984.
- D) The suite was not performed publicly until 1984.

26

Some early maps place the island several kilometers too far east. Navigational instruments of the period were less accurate at measuring longitude than latitude. The error therefore reflects a common technical limitation rather than carelessness.

Which choice best describes the organization of the text?

- A) It identifies an error, explains its likely cause, and interprets its significance.
- B) It argues for a claim and then withdraws it.
- C) It presents two unrelated discoveries and compares their dates.
- D) It lists several instruments without explaining their use.

27

Many city roofs absorb solar energy and become hot. Reflective roof coatings, by contrast, return more sunlight to the atmosphere. In one trial, rooms beneath coated roofs remained several degrees cooler.

The second sentence mainly serves to

- A) question the accuracy of the trial
- B) provide a historical example unrelated to the trial
- C) define a term used only in the final sentence
- D) introduce a contrast that helps explain the trial's result

10-MINUTE BREAK

Reading and Writing is complete.

Do not begin Math Module 1 until the break is over.

Math

22 QUESTIONS | 35 MINUTES

For multiple-choice questions, choose the best answer. For student-produced response questions, enter your answer in the space provided. A calculator is permitted throughout this section.

1

What is the solution to $5x + 15 = -15$?

- A) -5
- B) 6
- C) -6
- D) -7

2

A bicycle rental shop charges a fixed fee plus an hourly rate.

The fixed fee is \$15, the hourly rate is \$3, and the total charge is \$51. For how many hours was the bicycle rented?

- A) 13
- B) 11
- C) 12
- D) 17

3

What is the slope of the line through (1, -2) and (3, -6)?

- A) 2
- B) -3
- C) -1
- D) -2

4

$$2x + 3y = 40$$

$$4x - y = 24$$

What is the value of $x + y$ for the solution to the system?

- A) 16
- B) 17
- C) 18
- D) 8

5

Which inequality is equivalent to $4x + 6 > 18$?

- A) $x > 3$
- B) $x > 4$
- C) $x < 3$
- D) $x < 4$

6

Which expression is equivalent to $(6^x)(6^3)$?

- A) 6^{3x}
- B) 6^{x+3}
- C) 9^x
- D) 6^{x-3}

7

One solution to $x^2 - 3x - 10 = 0$ is -2. What is the other solution?

- A) 3
- B) -5
- C) -10
- D) 5

8

If $f(x) = 2x - 7$, what is $f(-3)$?

- A) -11
- B) -13
- C) 1
- D) -8

9

An item priced at \$240 is discounted by 20%. What is the sale price?

- A) 202
- B) 193
- C) 192
- D) 48

10

A box contains red and blue tiles in a ratio of 3 to 5.
If there are 18 red tiles, how many blue tiles are there?

- A) 23
- B) 48
- C) 30
- D) 27

11

A car travels 130 miles in 2 hours at a constant rate.
What is the rate in miles per hour?

- A) 43
- B) 67
- C) 65
- D) 128

12

The numbers are 6, 8, 10, 13, 13. What is their mean?

- A) 11
- B) 10
- C) 50
- D) 9

13

A bag contains 4 red, 9 blue, and 5 green marbles. One marble is selected at random. What is the probability that it is blue?

- A) $\frac{9}{18}$
- B) $\frac{4}{18}$
- C) $\frac{5}{18}$
- D) $\frac{9}{9}$

14

A trapezoid has parallel sides of lengths 8 and 16 and height 5. What is its area?

- A) 60
- B) 120
- C) 20
- D) 128

15

A circle has radius 8. Which expression gives its circumference?

- A) 8π
- B) 16π
- C) 64π
- D) 128π

16

A right triangle has legs of lengths 8 and 15. What is the length of the hypotenuse?

- A) 16
- B) 23
- C) 18
- D) 17

17

A rectangular prism has length 9, width 9, and height 7.
What is its volume?

- A) 414
- B) 88
- C) 574
- D) 567

18

Solve for x : $3x + 1 = 40$.

Response: _____

19

$$x + y = 19$$

$$x - y = -1$$

What is the value of x ?

Response: _____

20

What is the positive solution to $x^2 = 9$?

Response: _____

21

A quantity of 120 is increased by 25%. What is the amount of the increase?

Response: _____

22

A square has perimeter 44. What is its area?

Response: _____

Math

22 QUESTIONS | 35 MINUTES

For multiple-choice questions, choose the best answer. For student-produced response questions, enter your answer in the space provided. A calculator is permitted throughout this section.

1

$$y = x^2$$

$$y = 4x - 4$$

One intersection has $x = 2$. What is the corresponding y -value?

- A) 0
- B) 8
- C) 4
- D) 2

2

The graph of $y = 2(x + 0)^2 - 2$ has vertex (h, k) . What is the value of h ?

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

3

A population starts at 120 and is multiplied by 3 each hour. What is the population after 3 hours?

- A) 129
- B) 1080
- C) 3241
- D) 3240

4

Which expression is a factor of $x^2 + 7x + 12$?

- A) $x + (7)$
- B) $x - (12)$
- C) $x + (-7)$
- D) $x - (-3)$

5

What is the solution to $x/(x + 1) = 7/8$?

- A) 8
- B) -7
- C) 7
- D) 6

6

If $f(x) = 3x - 2$ and $g(x) = 3x$, what is $f(g(4))$?

- A) 34
- B) 37
- C) 30
- D) 11

7

Which expression is equivalent to $(x + 2)(x - 3)$?

- A) $x^2 - 1x - 6$
- B) $x^2 - 5x - 6$
- C) $x^2 - 1x + 6$
- D) $x^2 + 5x - 6$

8

The data set is 4, 6, 6, 7, 20, 22, 24. What is the median?

- A) 20
- B) 6
- C) 12
- D) 7

9

A school wants to estimate the proportion of students who use public transit.

Which method is most likely to produce a representative sample?

- A) Survey only students waiting at a bus stop.
- B) Randomly select students from every grade level.
- C) Survey members of the transit club.
- D) Survey the first 30 students entering one classroom.

10

Among 42 students who take art, 18 also take music. If one art student is selected at random, what is the probability that the student also takes music?

- A) $18/42$
- B) $42/18$
- C) $24/42$
- D) $18/100$

11

A price of \$200 is increased by 20% and then decreased by 10%. What is the final price?

- A) 200
- B) 216
- C) 220
- D) 144

12

Two triangles are similar.

A side of length 8 in the smaller triangle corresponds to a side of length 16 in the larger triangle. If another side of the smaller triangle has length 5, what is the corresponding length in the larger triangle?

- A) 2.5
- B) 10
- C) 2
- D) 13

13

What is the radius of the circle $(x + 1)^2 + (y + 4)^2 = 4$?

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

14

In right triangle ABC, angle A has opposite side length 5 and hypotenuse 13.

What is $\sin A$?

- A) $12/13$
- B) $13/5$
- C) $5/12$
- D) $5/13$

15

All dimensions of a rectangular prism are multiplied by 2. By what factor is its volume multiplied?

- A) 4
- B) 8
- C) 9
- D) 2

16

What is the midpoint of the segment with endpoints (2, -3) and (10, 3)?

- A) (8, 6)
- B) (7, 0)
- C) (6, 1)
- D) (6, 0)

17

The equation $x^2 - 12x + k = 0$ has exactly one solution. What is k ?

Response: _____

18

$$3x + 2y = 21$$

$$5x - y = 22$$

What is the value of y ?

Response: _____

19

If $f(t) = 10(3)^t$, what is $f(5)$?

Response: _____

20

The mean of 20, 11, 18, 15, and x is 12. What is x ?

Response: _____

21

The area of a circle is $k\pi$ and its radius is 5. What is k ?

Response: _____

22

A machine produces 15 parts per hour at a constant rate. How many parts does it produce in 3 hours?

Response: _____

ANSWER KEY

Use this key to check your work. Student-produced responses appear as values rather than letters.

Reading and Writing - Module 1

1	A	10	B	19	B
2	A	11	B	20	C
3	D	12	B	21	B
4	A	13	A	22	B
5	B	14	C	23	C
6	A	15	D	24	C
7	D	16	D	25	B
8	A	17	C	26	A
9	C	18	D	27	A

Reading and Writing - Module 2

1	A	10	A	19	B
2	A	11	A	20	C
3	D	12	D	21	B
4	B	13	A	22	C
5	B	14	B	23	D
6	D	15	C	24	B
7	A	16	A	25	C
8	A	17	D	26	A
9	C	18	B	27	D

ANSWER KEY - MATH

Math - Module 1

1	C	12	B
2	C	13	A
3	D	14	A
4	A	15	B
5	A	16	D
6	B	17	D
7	D	18	13
8	B	19	9
9	C	20	3
10	C	21	30
11	C	22	121

Math - Module 2

1	C	12	B
2	D	13	D
3	D	14	D
4	D	15	B
5	C	16	D
6	A	17	36
7	A	18	3
8	D	19	2430
9	B	20	-4
10	A	21	25
11	B	22	45