

DIGITAL SAT-STYLE

Full-Length Practice Test

SAT MOCK_FIVE - 2026 FORMAT

Plan a complete practice session.

Reading and Writing: 54 questions, 64 minutes

10-minute break

Math: 44 questions, 70 minutes

This original resource is not affiliated with or endorsed by College Board.

SAT is a registered trademark of College Board.

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)

(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

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

In the report, 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

2

In the report, the second experiment was designed to validate the first study’s results.

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

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

3

According to the project summary, a second set of measurements helped corroborate the team’s original finding.

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

- A) publicly criticize
- B) confirm with additional evidence
- C) make less precise
- D) replace entirely

4

According to the project summary, the radio signal was sporadic, appearing for a few seconds and then disappearing for hours.

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

- A) continuous
- B) occurring irregularly
- C) extremely loud
- D) irregular

5

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

6

Researchers studying street trees measured surface temperatures. They found that neighborhoods with denser tree cover were cooler in the afternoon. The researchers note that the study did not control for every environmental difference.

Which choice best states the main idea of the text?

- A) Tree cover may help reduce afternoon heat, though other neighborhood features could also matter.
- B) The researchers found no relationship involving street trees.
- C) The authors recommend ending all future research on street trees.
- D) The study proves that street trees is the only factor affecting surface temperatures.

7

Researchers studying bus fare experiment measured ridership. They found that ridership rose when fares were reduced, especially on weekends. The team recommends repeating the work in additional locations.

Which choice best states the main idea of the text?

- A) The study proves that bus fare experiment is the only factor affecting ridership.
- B) The authors recommend ending all future research on bus fare experiment.
- C) Lower fares may increase ridership, with the strongest effect on weekends.
- D) The researchers found no relationship involving bus fare experiment.

8

Researchers studying ceramic glazes measured firing temperature. They found that glazes fired at moderate temperatures retained color better. 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 researchers found no relationship involving ceramic glazes.
- B) The authors recommend ending all future research on ceramic glazes.
- C) The study proves that ceramic glazes is the only factor affecting firing temperature.
- D) Moderate firing temperatures may preserve glaze color.

9

A software team reduced the number of menu options in an app. New users completed a task faster, while experienced users showed little change. The pattern was observed more than once.

Which conclusion is best supported by the text?

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

10

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.

Which inference is best supported by the text?

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

11

A theater replaced printed programs with a mobile version. Paper use declined, but some audience members requested printed summaries at the entrance.

Which conclusion is best supported by the text?

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

12

A study recorded the following results:

Control: 62

Low dose: 68

High dose: 55

Which choice is best supported by the data?

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

13

A study recorded the following results:

Morning: 35

Afternoon: 42

Evening: 30

Which choice is best supported by the data?

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

14

A study recorded the following results:

No reminder: 60

Email reminder: 67

Text reminder: 50

Which choice is best supported by the data?

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

15

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

16

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

17

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

18

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) more reliable
- D) reliability is greater

19

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

Which choice completes the text with the most logical transition?

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

20

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

Which choice completes the text with the most logical transition?

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

21

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

Which choice completes the text with the most logical transition?

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

22

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

23

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

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

25

The manuscript contains several erased lines. Modern imaging reveals some of the hidden writing without damaging the page. This technique has allowed scholars to recover portions of an earlier draft.

What is the main function of the second sentence?

- A) It explains the method that made the recovery possible.
- B) It describes the manuscript's original owner.
- C) It argues that the manuscript should not be studied.
- D) It presents a competing interpretation of the draft.

26

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

27

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

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

In the report, the editor reorganized the paragraphs so that the argument would be more coherent.

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

- A) emotionally persuasive
- B) make the result less certain
- C) briefly stated
- D) logically connected

2

According to the project summary, rather than redesigning the entire system, the committee chose the pragmatic option of repairing its most damaged parts first.

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

- A) focused on practical results
- B) unlikely to succeed
- C) purely theoretical
- D) based on tradition

3

According to the project summary, the bridge’s robust supports remained stable during the earthquake.

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

- A) recently installed
- B) lightweight
- C) strong and durable
- D) strong and able to withstand stress

4

According to the project summary, to substantiate the claim, the authors included data from three independent laboratories.

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

- A) support with evidence
- B) make the result less certain
- C) state more cautiously
- D) make more popular

5

Researchers studying recycled concrete measured compressive strength. They found that a mixture containing 20 percent recycled aggregate performed nearly as well as the conventional mixture. 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) Some recycled aggregate can be used without greatly reducing strength.
- B) The study proves that recycled concrete is the only factor affecting compressive strength.
- C) The researchers found no relationship involving recycled concrete.
- D) The authors recommend ending all future research on recycled concrete.

6

Researchers studying library hours measured student visits. They found that evening visits increased after the library stayed open two hours later. 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) The study proves that library hours is the only factor affecting student visits.
- B) The authors recommend ending all future research on library hours.
- C) Later hours were associated with more evening use.
- D) The researchers found no relationship involving library hours.

7

Researchers studying shade cloth measured seedling growth. They found that seedlings under partial shade grew taller than those in full sun. 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 study proves that shade cloth is the only factor affecting seedling growth.
- B) The authors recommend ending all future research on shade cloth.
- C) Partial shade may benefit early seedling growth.
- D) The researchers found no relationship involving shade cloth.

8

A geologist compared two layers of volcanic ash. The layers had nearly identical mineral compositions and were found at sites hundreds of kilometers apart.

Which inference is best supported by the text?

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

9

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 authors state that further testing would be useful.

Which conclusion is best supported by the text?

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

10

Researchers found that a lizard species was active at dawn in open habitats but remained active later in shaded habitats. The authors state that further testing would be useful.

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.

11

A botanist observed that a mountain flower opened earlier on warmer mornings. On cool mornings, the same flowers remained closed until midday. The pattern was observed more than once.

Which conclusion is best supported by the text?

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

12

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. The pattern was observed more than once.

Which inference is best supported by the text?

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

13

A study recorded the following results:

No reminder: 41

Email reminder: 50

Text reminder: 34

Which choice is best supported by the data?

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

14

A study recorded the following results:

Standard soil: 48

Compost mix: 56

Sand mix: 38

Which choice is best supported by the data?

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

15

A study recorded the following results:

No shade: 52

Partial shade: 66

Full shade: 44

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.

16

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

17

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) ,
- C) [no punctuation]
- D) ;

18

Walking through the restored garden, _____.

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

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

19

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) their
- C) there
- D) it's

20

A series of public lectures ____ stored in the archive's climate-controlled room.

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

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

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) Nevertheless,
- D) Instead,

22

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

Which choice completes the text with the most logical transition?

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

23

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

Which choice completes the text with the most logical transition?

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

24

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.

25

A student has taken the following notes:

- The fossil was discovered in a limestone cave.
- The same species had previously been known only from coastal deposits.

The student wants to emphasize that the discovery expanded the known habitat of the species.

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

- A) The same species had previously been known only from coastal deposits.
- B) The fossil was discovered in a limestone cave, and the same species had previously been known only from coastal deposits.
- C) Although the fossil was discovered in a limestone cave, no information is available about its later history.
- D) The fossil was discovered in a limestone cave.

26

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

27

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

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 $5x - 11 = 4$?

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

2

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

The fixed fee is \$11, the hourly rate is \$5, and the total charge is \$56. For how many hours was the bicycle rented?

- A) 11
- B) 8
- C) 10
- D) 9

3

What is the slope of the line through (0, 5) and (2, 1)?

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

4

$$2x + 3y = 32$$

$$4x - y = 8$$

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

- A) 4
- B) 8
- C) 14
- D) 12

5

Which inequality is equivalent to $4x + 1 > 9$?

- A) $x < 3$
- B) $x > 2$
- C) $x < 2$
- D) $x > 3$

6

Which expression is equivalent to $(4^x)(4^3)$?

- A) 4^{3x}
- B) 4^{x+3}
- C) 4^{x-3}
- D) 7^x

7

One solution to $x^2 + 0x - 9 = 0$ is -3. What is the other solution?

- A) 0
- B) 3
- C) -9
- D) -3

8

If $f(x) = 5x + 5$, what is $f(-3)$?

- A) 7
- B) -20
- C) -10
- D) -5

9

An item priced at \$80 is discounted by 30%. What is the sale price?

- A) 57
- B) 24
- C) 66
- D) 56

10

A box contains red and blue tiles in a ratio of 3 to 5. If there are 15 red tiles, how many blue tiles are there?

- A) 25
- B) 20
- C) 22
- D) 40

11

A car travels 260 miles in 4 hours at a constant rate. What is the rate in miles per hour?

- A) 69
- B) 256
- C) 65
- D) 52

12

The numbers are 11, 5, 7, 9, 43. What is their mean?

- A) 16
- B) 75
- C) 15
- D) 14

13

A bag contains 3 red, 5 blue, and 2 green marbles. One marble is selected at random. What is the probability that it is blue?

- A) $\frac{2}{10}$
- B) $\frac{5}{10}$
- C) $\frac{5}{5}$
- D) $\frac{3}{10}$

14

A trapezoid has parallel sides of lengths 8 and 15 and height 8. What is its area?

- A) 120
- B) 28
- C) 92
- D) 184

15

A circle has radius 10. Which expression gives its circumference?

- A) 20π
- B) 100π
- C) 10π
- D) 200π

16

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

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

17

A rectangular prism has length 9, width 6, and height 3. What is its volume?

- A) 162
- B) 57
- C) 165
- D) 198

18

Solve for x : $3x - 8 = 13$.

Response: _____

19

$$x + y = 7$$

$$x - y = 1$$

What is the value of x ?

Response: _____

20

What is the positive solution to $x^2 = 81$?

Response: _____

21

A quantity of 160 is increased by 25%. What is the amount of the increase?

Response: _____

22

A square has perimeter 40. 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

$$y = x^2$$

$$y = 2x + 0$$

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

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

2

The graph of $y = -1(x + 5)^2 + 1$ has vertex (h, k) . What is the value of h ?

- A) 5
- B) 1
- C) -1
- D) -5

3

A population starts at 50 and is multiplied by 2 each hour. What is the population after 2 hours?

- A) 201
- B) 200
- C) 100
- D) 54

4

Which expression is a factor of $x^2 - 4x + 4$?

- A) $x + (4)$
- B) $x + (-4)$
- C) $x - (2)$
- D) $x - (4)$

5

What is the solution to $x/(x + 1) = 4/5$?

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

6

If $f(x) = 4x - 4$ and $g(x) = 4x$, what is $f(g(1))$?

- A) 16
- B) 12
- C) 13
- D) 0

7

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

- A) $x^2 + 3x - 18$
- B) $x^2 + 3x + 18$
- C) $x^2 - 9x - 18$
- D) $x^2 + 9x - 18$

8

The data set is 8, 13, 14, 15, 15, 16, 22. What is the median?

- A) -15
- B) 15
- C) 16
- D) 14

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

10

Among 35 students who take art, 11 also take music. If one art student is selected at random, what is the probability that the student also takes music?

- A) $11/100$
- B) $35/11$
- C) $24/35$
- D) $11/35$

11

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

- A) 200
- B) 199
- C) 198
- D) 162

12

Two triangles are similar.

A side of length 8 in the smaller triangle corresponds to a side of length 24 in the larger triangle. If another side of the smaller triangle has length 9, what is the corresponding length in the larger triangle?

- A) 27
- B) 19
- C) 25
- D) 3

13

What is the radius of the circle $(x + 4)^2 + (y + 5)^2 = 25$?

- A) 5
- B) 25
- C) 9
- D) 10

14

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

What is $\sin A$?

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

15

All dimensions of a rectangular prism are multiplied by 3. By what factor is its volume multiplied?

- A) 3
- B) 27
- C) 9
- D) 6

16

What is the midpoint of the segment with endpoints (1, -5) and (15, -1)?

- A) (14, 4)
- B) (8, -3)
- C) (9, -3)
- D) (8, -2)

17

The equation $x^2 - 4x + k = 0$ has exactly one solution. What is k ?

Response: _____

18

$$3x + 2y = 27$$

$$5x - y = 19$$

What is the value of y ?

Response: _____

19

If $f(t) = 10(2)^t$, what is $f(4)$?

Response: _____

20

The mean of 18, 10, 13, 15, and x is 12. What is x ?

Response: _____

21

The area of a circle is $k\pi$ and its radius is 10. What is k ?

Response: _____

22

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

Reading and Writing - Module 2

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

ANSWER KEY - MATH

Math - Module 1

1	C	12	C
2	D	13	B
3	C	14	C
4	D	15	A
5	B	16	C
6	B	17	A
7	B	18	7
8	C	19	4
9	D	20	9
10	A	21	40
11	C	22	100

Math - Module 2

1	D	12	A
2	D	13	A
3	B	14	B
4	C	15	B
5	B	16	B
6	B	17	4
7	A	18	6
8	B	19	160
9	D	20	4
10	D	21	100
11	C	22	54