

DIGITAL SAT-STYLE

Full-Length Practice Test

SAT MOCK TWO - 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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(D)
- 7

(A)

(B)

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- 8

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- 9

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- 12

(A)

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- 14

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(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

It may seem counterintuitive, but adding a small amount of friction can make the device easier to control.

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

- A) contrary to what one might expect
- B) supported by tradition
- C) contrary to expectation
- D) difficult to measure

2

At low temperatures, the difference between the two measurements was negligible.

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

- A) so small as to be unimportant
- B) difficult to calculate
- C) too small to matter
- D) unexpectedly large

3

From the worn steps, archaeologists could infer that the entrance had been used frequently.

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

- A) reach a conclusion from evidence
- B) reach a conclusion
- C) measure directly
- D) disprove completely

4

The barrier is designed to attenuate sound before it reaches nearby homes.

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

- A) reduce in force
- B) redirect completely
- C) record accurately
- D) make the result less certain

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) The study proves that recycled concrete is the only factor affecting compressive strength.
- B) The authors recommend ending all future research on recycled concrete.
- C) Some recycled aggregate can be used without greatly reducing strength.
- D) The researchers found no relationship involving 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) Later hours were associated with more evening use.
- B) The authors recommend ending all future research on library hours.
- C) The researchers found no relationship involving library hours.
- D) The study proves that library hours is the only factor affecting student visits.

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) Partial shade may benefit early seedling growth.
- C) The authors recommend ending all future research on shade cloth.
- D) The researchers found no relationship involving shade cloth.

8

Researchers studying museum lighting measured visitor attention. They found that visitors spent longer at displays illuminated with moderate rather than very bright light. 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 museum lighting.
- B) The authors recommend ending all future research on museum lighting.
- C) Moderate lighting may support visitor attention better than very bright lighting.
- D) The study proves that museum lighting is the only factor affecting visitor attention.

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. The pattern was observed more than once.

Which inference is best supported by the text?

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

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. The pattern was observed more than once.

Which conclusion is best supported by the text?

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

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.

Which inference is best supported by the text?

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

12

A study recorded the following results:

No reminder: 53

Email reminder: 66

Text reminder: 43

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) Email reminder had a lower appointments kept (%) than No reminder.
- D) Text reminder had the highest appointments kept (%).

13

A study recorded the following results:

Standard soil: 55

Compost mix: 63

Sand mix: 47

Which choice is best supported by the data?

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

14

A study recorded the following results:

No shade: 49

Partial shade: 56

Full shade: 44

Which choice is best supported by the data?

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

15

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

16

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

17

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

18

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

19

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,

20

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

Which choice completes the text with the most logical transition?

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

21

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

Which choice completes the text with the most logical transition?

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

22

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

23

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) The fossil was discovered in a limestone cave.
- D) Although the fossil was discovered in a limestone cave, no information is available about its later history.

24

A student has taken the following notes:

- The bridge uses timber beams reinforced with steel plates.
- This design reduced both weight and construction cost.

The student wants to explain two advantages of the bridge's hybrid design.

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

- A) This design reduced both weight and construction cost.
- B) The bridge uses timber beams reinforced with steel plates.
- C) The bridge uses timber beams reinforced with steel plates, and this design reduced both weight and construction cost.
- D) Although the bridge uses timber beams reinforced with steel plates, 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 lists several instruments without explaining their use.
- B) It identifies an error, explains its likely cause, and interprets its significance.
- C) It argues for a claim and then withdraws it.
- D) It presents two unrelated discoveries and compares their dates.

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

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

The debate shifted when researchers introduced empirical evidence from field measurements.

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

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

2

In a candid interview, the director acknowledged several mistakes made during the project.

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

- A) make the result less certain
- B) highly technical
- C) honest and direct
- D) carefully rehearsed

3

In the report, the architect favored an austere style: undecorated walls, simple forms, and a narrow range of materials.

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

- A) emotionally joyful
- B) severely plain
- C) highly realistic
- D) technically unfinished

4

In the report, among the report’s many findings, the most salient was the sharp decline in water use.

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

- A) unrelated to the topic
- B) especially noticeable or important
- C) especially important
- D) difficult to verify

5

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 study proves that sleep schedules is the only factor affecting reaction time.
- D) The researchers found no relationship involving sleep schedules.

6

Researchers studying reflective roofs measured indoor temperature. They found that top-floor rooms under reflective roofs stayed cooler. 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 reflective roofs is the only factor affecting indoor temperature.
- B) The researchers found no relationship involving reflective roofs.
- C) Reflective roofs may reduce heat in top-floor rooms.
- D) The authors recommend ending all future research on reflective roofs.

7

Researchers studying language practice measured long-term recall. They found that students who spaced practice over four days remembered more words than students who practiced once. 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 researchers found no relationship involving language practice.
- B) The authors recommend ending all future research on language practice.
- C) Spacing practice may improve long-term recall.
- D) The study proves that language practice is the only factor affecting long-term recall.

8

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 increased ticket sales.
- C) The mobile program reduced paper use but did not meet every audience member's preference.
- D) All audience members preferred the mobile program.

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.

Which inference is best supported by the text?

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

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 authors state that further testing would be useful.

Which conclusion is best supported by the text?

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

11

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

12

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

13

A study recorded the following results:

No shade: 54

Partial shade: 64

Full shade: 44

Which choice is best supported by the data?

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

14

A study recorded the following results:

Control: 35

Low dose: 47

High dose: 28

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) High dose had the highest average activity score.
- D) Low dose had the highest average activity score.

15

A study recorded the following results:

Morning: 51

Afternoon: 64

Evening: 42

Which choice is best supported by the data?

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

16

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

17

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

18

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

19

Walking through the restored garden, ____.

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

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

20

Each of the sculptures has ____ own protective case.
Which choice completes the text so that it conforms to the conventions of Standard English?

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

21

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

Which choice completes the text with the most logical transition?

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

22

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) Likewise,
- C) Nevertheless,
- D) Subsequently,

23

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

Which choice completes the text with the most logical transition?

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

24

A student has taken the following notes:

- The Harbor Reading Room began as a one-room library in 1898.
- It now serves more than 60,000 visitors each year.

The student wants to show how the library has grown over time.

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

- A) The Harbor Reading Room began as a one-room library in 1898.
- B) The Harbor Reading Room began as a one-room library in 1898, and it now serves more than 60,000 visitors each year.
- C) Although the harbor reading room began as a one-room library in 1898, no information is available about its later history.
- D) It now serves more than 60,000 visitors each year.

25

A student has taken the following notes:

- Engineer Priya Shah designed a low-cost water filter.
- The filter can be assembled using commonly available materials.

The student wants to explain why Shah's filter may be practical in many communities.

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

- A) Although engineer priya shah designed a low-cost water filter, no information is available about its later history.
- B) Engineer Priya Shah designed a low-cost water filter, and the filter can be assembled using commonly available materials.
- C) The filter can be assembled using commonly available materials.
- D) Engineer Priya Shah designed a low-cost water filter.

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 lists several instruments without explaining their use.
- C) It presents two unrelated discoveries and compares their dates.
- D) It argues for a claim and then withdraws it.

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

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 $4x + 8 = 8$?

- A) -1
- B) 1
- C) 0

2

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

The fixed fee is \$13, the hourly rate is \$8, and the total charge is \$125. For how many hours was the bicycle rented?

- A) 15
- B) -14
- C) 14
- D) 13

3

What is the slope of the line through (2, -5) and (4, -13)?

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

4

$$2x + 3y = 7$$

$$4x - y = 7$$

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

- A) 5
- B) 2
- C) 1
- D) 3

5

Which inequality is equivalent to $4x + 4 > 32$?

- A) $x > 8$
- B) $x > 7$
- C) $x < 8$
- D) $x < 7$

6

Which expression is equivalent to $(5^x)(5^3)$?

- A) 8^x
- B) 5^{3x}
- C) 5^{x+3}
- D) 5^{x-3}

7

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

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

8

If $f(x) = 4x + 7$, what is $f(-3)$?

- A) 8
- B) -19
- C) -5
- D) -1

9

An item priced at \$120 is discounted by 15%. What is the sale price?

- A) 112
- B) 102
- C) 103
- D) 18

10

A box contains red and blue tiles in a ratio of 3 to 5. If there are 24 red tiles, how many blue tiles are there?

- A) 37
- B) 29
- C) 64
- D) 40

11

A car travels 165 miles in 3 hours at a constant rate. What is the rate in miles per hour?

- A) 162
- B) 58
- C) 55
- D) 41

12

The numbers are 5, 12, 5, 12, 41. What is their mean?

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

13

A bag contains 3 red, 4 blue, and 6 green marbles. One marble is selected at random. What is the probability that it is blue?

- A) $\frac{4}{9}$
- B) $\frac{6}{13}$
- C) $\frac{3}{13}$
- D) $\frac{4}{13}$

14

A trapezoid has parallel sides of lengths 12 and 18 and height 7. What is its area?

- A) 105
- B) 21
- C) 216
- D) 210

15

A circle has radius 5. Which expression gives its circumference?

- A) 10π
- B) 50π
- C) 25π
- D) 5π

16

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

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

17

A rectangular prism has length 3, width 4, and height 3. What is its volume?

- A) 15
- B) 36
- C) 66
- D) 39

18

Solve for x : $5x - 9 = -34$.

Response: _____

19

$$x + y = 14$$

$$x - y = -4$$

What is the value of x ?

Response: _____

20

What is the positive solution to $x^2 = 36$?

Response: _____

21

A quantity of 200 is increased by 10%. What is the amount of the increase?

Response: _____

22

A square has perimeter 28. 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

$$y = x^2$$

$$y = 5x - 4$$

One intersection has $x = 4$. What is the corresponding y -value?

- A) 20
- B) 16
- C) 12
- D) 4

2

The graph of $y = 1(x - 2)^2 + 8$ has vertex (h, k) . What is the value of h ?

- A) 2
- B) -2
- C) 8
- D) 1

3

A population starts at 80 and is multiplied by 2 each hour. What is the population after 3 hours?

- A) 480
- B) 320
- C) 86
- D) 640

4

Which expression is a factor of $x^2 + 0x - 1$?

- A) $x - (1)$
- B) $x - (-1)$
- C) $x + (0)$
- D) 0

5

What is the solution to $x/(x + 1) = 6/7$?

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

6

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

- A) 8
- B) 14
- C) 16
- D) 12

7

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

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

8

The data set is 4, 6, 11, 14, 16, 20, 23. What is the median?

- A) 14
- B) 13
- C) 16
- D) 11

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 41 students who take art, 24 also take music. If one art student is selected at random, what is the probability that the student also takes music?

- A) $17/41$
- B) $41/24$
- C) $24/41$
- D) $24/100$

11

A price of \$100 is increased by 10% and then decreased by 10%. What is the final price?

- A) 99
- B) 98
- C) 81
- D) 100

12

Two triangles are similar.

A side of length 5 in the smaller triangle corresponds to a side of length 15 in the larger triangle. If another side of the smaller triangle has length 6, what is the corresponding length in the larger triangle?

- A) 2
- B) 16
- C) 18
- D) 13

13

What is the radius of the circle $(x + 4)^2 + (y + 4)^2 = 64$?

- A) 16
- B) 64
- C) 9
- D) 8

14

In right triangle ABC, angle A has opposite side length 3 and hypotenuse 5.

What is $\sin A$?

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

15

All dimensions of a rectangular prism are multiplied by 4. By what factor is its volume multiplied?

- A) 4
- B) 64
- C) 16
- D) 8

16

What is the midpoint of the segment with endpoints $(-1, -8)$ and $(9, 2)$?

- A) $(4, -2)$
- B) $(4, -3)$
- C) $(5, -3)$
- D) $(10, 10)$

17

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

Response: _____

18

$$3x + 2y = 32$$

$$5x - y = 23$$

What is the value of y ?

Response: _____

19

If $f(t) = 20(2)^t$, what is $f(5)$?

Response: _____

20

The mean of 16, 18, 7, 19, and x is 13. What is x ?

Response: _____

21

The area of a circle is $k\pi$ and its radius is 6. What is k ?

Response: _____

22

A machine produces 18 parts per hour at a constant rate. How many parts does it produce in 5 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	D	19	B
2	A	11	D	20	B
3	A	12	B	21	A
4	A	13	D	22	B
5	C	14	C	23	B
6	A	15	B	24	C
7	B	16	A	25	B
8	C	17	C	26	B
9	D	18	D	27	D

Reading and Writing - Module 2

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

ANSWER KEY - MATH

Math - Module 1

1	C	12	C
2	C	13	D
3	B	14	A
4	D	15	A
5	B	16	A
6	C	17	B
7	B	18	-5
8	C	19	5
9	B	20	6
10	D	21	20
11	C	22	49

Math - Module 2

1	B	12	C
2	A	13	D
3	D	14	A
4	A	15	B
5	C	16	B
6	B	17	4
7	D	18	7
8	A	19	640
9	B	20	5
10	C	21	36
11	A	22	90