

DIGITAL SAT-STYLE

Full-Length Practice Test

SAT MOCK ONE - 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)

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- 7

(A)

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- 12

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- 14

(A)

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(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

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

2

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) difficult to verify
- C) especially noticeable or important
- D) especially important

3

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

4

The material’s flexibility is intrinsic rather than produced by an added coating.

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

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

5

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 authors recommend ending all future research on language practice.
- B) The study proves that language practice is the only factor affecting long-term recall.
- C) Spacing practice may improve long-term recall.
- D) The researchers found no relationship involving language practice.

6

Researchers studying urban gardens measured pollinator visits. They found that gardens with more flower species attracted more kinds of bees. 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 urban gardens.
- B) The authors recommend ending all future research on urban gardens.
- C) The study proves that urban gardens is the only factor affecting pollinator visits.
- D) Greater flower diversity may support greater bee diversity.

7

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

8

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.

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.

Which conclusion is best supported by the text?

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

10

Researchers found that a lizard species was active at dawn in open habitats but remained active later in shaded habitats.

Which inference is best supported by the text?

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

11

A botanist observed that a mountain flower opened earlier on warmer mornings. On cool mornings, the same flowers remained closed until midday. The authors state that further testing would be useful.

Which conclusion is best supported by the text?

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

12

A study recorded the following results:

Morning: 54

Afternoon: 67

Evening: 45

Which choice is best supported by the data?

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

13

A study recorded the following results:

No reminder: 42

Email reminder: 48

Text reminder: 37

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) No reminder and Email reminder had identical appointments kept (%).
- D) Email reminder had a lower appointments kept (%) than No reminder.

14

A study recorded the following results:

Standard soil: 39

Compost mix: 52

Sand mix: 32

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) Compost mix had the highest plant height (cm).
- D) Sand mix had the highest plant height (cm).

15

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) ;
- D) [no punctuation]

16

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

17

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) their
- C) its
- D) there

18

A collection of early maps ____ stored in the archive's climate-controlled room.

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

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

19

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

Which choice completes the text with the most logical transition?

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

20

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

21

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

Which choice completes the text with the most logical transition?

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

22

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.

23

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) Although the bridge uses timber beams reinforced with steel plates, no information is available about its later history.
- C) The bridge uses timber beams reinforced with steel plates.
- D) The bridge uses timber beams reinforced with steel plates, and this design reduced both weight and construction cost.

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

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

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 identifies an error, explains its likely cause, and interprets its significance.
- C) It lists several instruments without explaining their use.
- D) It presents two unrelated discoveries and compares their dates.

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 radio signal was sporadic, appearing for a few seconds and then disappearing for hours.

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

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

2

The conservator kept meticulous notes about every repair made to the painting.

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

- A) showing great attention to detail
- B) secretive
- C) unnecessarily brief
- D) highly detailed

3

After the costs were recalculated, the smaller project remained financially viable.

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

- A) capable of succeeding
- B) legally required
- C) capable of working successfully
- D) unlikely to attract attention

4

The comprehensive plan addresses transportation, housing, parks, and water use.

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

- A) covering many aspects
- B) focused on one detail
- C) covering many relevant aspects
- D) approved unanimously

5

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) Moderate firing temperatures may preserve glaze color.
- D) The study proves that ceramic glazes is the only factor affecting firing temperature.

6

Researchers studying owl nesting boxes measured nesting success. They found that boxes placed far from busy roads produced more chicks. 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) Road noise may affect nesting success, but habitat quality could also contribute.
- B) The study proves that owl nesting boxes is the only factor affecting nesting success.
- C) The researchers found no relationship involving owl nesting boxes.
- D) The authors recommend ending all future research on owl nesting boxes.

7

Researchers studying coral nurseries measured survival. They found that fragments raised in shaded nurseries survived heat waves more often. 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 coral nurseries.
- B) The authors recommend ending all future research on coral nurseries.
- C) Nursery shading may improve coral survival during heat stress.
- D) The study proves that coral nurseries is the only factor affecting survival.

8

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 authors state that further testing would be useful.

Which inference is best supported by the text?

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

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 authors state that further testing would be useful.

Which conclusion is best supported by the text?

- A) New users preferred more menu options.
- B) Experienced users completed the task more slowly.
- 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. The pattern was observed more than once.

Which inference is best supported by the text?

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

11

A theater replaced printed programs with a mobile version. Paper use declined, but some audience members requested printed summaries at the entrance. The pattern was observed more than once.

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.

12

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 pattern was observed more than once.

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 sites were once adjacent.
- D) The layers may have come from the same large eruption.

13

A study recorded the following results:

Standard soil: 46

Compost mix: 59

Sand mix: 42

Which choice is best supported by the data?

- A) Compost mix had a lower plant height (cm) than Standard soil.
- B) Sand mix had the highest plant height (cm).
- C) Compost 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: 39

Partial shade: 48

Full shade: 31

Which choice is best supported by the data?

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

15

A study recorded the following results:

Control: 54

Low dose: 66

High dose: 47

Which choice is best supported by the data?

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

16

A collection of early maps ____ 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) were being
- C) is
- D) are

17

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

18

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

19

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) is collecting
- C) collects
- D) had collected

20

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) more reliable
- C) reliability is greater
- D) having more reliability

21

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) For example,
- C) However,
- D) Therefore,

22

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

Which choice completes the text with the most logical transition?

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

23

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) Likewise,
- C) Nevertheless,
- D) For instance,

24

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

25

A student has taken the following notes:

- The journal began publishing online in 2004.
- Its print edition ended in 2017.

The student wants to describe the journal's gradual shift from print to digital publication.

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

- A) The journal began publishing online in 2004.
- B) Its print edition ended in 2017.
- C) The journal began publishing online in 2004, and its print edition ended in 2017.
- D) Although the journal began publishing online in 2004, no information is available about its later history.

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) give an example of a normal increase
- B) restate the first sentence in simpler terms
- C) contrast the recent decline with ordinary year-to-year variation
- 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 presents two unrelated discoveries and compares their dates.
- B) It argues for a claim and then withdraws it.
- C) It lists several instruments without explaining their use.
- 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 $4x - 4 = -32$?

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

2

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

The fixed fee is \$17, the hourly rate is \$7, and the total charge is \$108. For how many hours was the bicycle rented?

- A) 15
- B) 12
- C) 14
- D) 13

3

What is the slope of the line through (2, 3) and (5, 12)?

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

4

$$2x + 3y = 28$$

$$4x - y = 28$$

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

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

5

Which inequality is equivalent to $2x - 1 > 15$?

- A) $x > 9$
- B) $x < 8$
- C) $x > 8$
- D) $x < 9$

6

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

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

7

One solution to $x^2 + 1x - 20 = 0$ is -5. What is the other solution?

- A) -1
- B) -4
- C) 4
- D) -20

8

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

- A) -8
- B) -3
- C) -4
- D) -6

9

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

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

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) 40
- C) 20
- D) 22

11

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

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

12

The numbers are 9, 11, 14, 12, -1. What is their mean?

- A) 10
- B) 9
- C) 45
- D) 8

13

A bag contains 3 red, 8 blue, and 2 green marbles. One marble is selected at random. What is the probability that it is blue?

- A) $\frac{8}{13}$
- B) $\frac{8}{5}$
- C) $\frac{2}{13}$
- D) $\frac{3}{13}$

14

A trapezoid has parallel sides of lengths 8 and 19 and height 5. What is its area?

- A) 27.5
- B) 67.5
- C) 152
- D) 135

15

A circle has radius 7. Which expression gives its circumference?

- A) 98π
- B) 49π
- C) 7π
- D) 14π

16

A right triangle has legs of lengths 7 and 24. What is the length of the hypotenuse?

- A) 26
- B) 25
- C) 24
- D) 31

17

A rectangular prism has length 6, width 8, and height 4.
What is its volume?

- A) 196
- B) 208
- C) 192
- D) 52

18

Solve for x : $3x - 2 = -8$.

Response: _____

19

$$x + y = 12$$

$$x - y = 4$$

What is the value of x ?

Response: _____

20

What is the positive solution to $x^2 = 49$?

Response: _____

21

A quantity of 160 is increased by 10%. What is the amount of the increase?

Response: _____

22

A square has perimeter 20. 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

$$y = x^2$$

$$y = 4x - 3$$

One intersection has $x = 3$. What is the corresponding y -value?

- A) 12
- B) 3
- C) 6
- D) 9

2

The graph of $y = -1(x + 3)^2 - 3$ has vertex (h, k) . What is the value of h ?

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

3

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

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

4

Which expression is a factor of $x^2 + 7x + 10$?

- A) $x + (7)$
- B) $x - (-5)$
- C) $x - (10)$
- D) $x + (-7)$

5

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

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

6

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

- A) 14
- B) 5
- C) 6
- D) 17

7

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

- A) $x^2 + 0x + 4$
- B) $x^2 - 4x - 4$
- C) $x^2 + 4x - 4$
- D) $x^2 + 0x - 4$

8

The data set is 5, 9, 13, 16, 17, 19, 20. What is the median?

- A) 17
- B) 14
- C) 16
- D) 13

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

10

Among 44 students who take art, 37 also take music. If one art student is selected at random, what is the probability that the student also takes music?

- A) $44/37$
- B) $37/100$
- C) $37/44$
- D) $7/44$

11

A price of \$100 is increased by 10% and then decreased by 20%. What is the final price?

- A) 100
- B) 72
- C) 90
- D) 88

12

Two triangles are similar.

A side of length 7 in the smaller triangle corresponds to a side of length 14 in the larger triangle. If another side of the smaller triangle has length 4, what is the corresponding length in the larger triangle?

- A) 8
- B) 11
- C) 2
- D) 1

13

What is the radius of the circle $(x + 0)^2 + (y - 5)^2 = 16$?

- A) 8
- B) 16
- C) 5
- D) 4

14

In right triangle ABC, angle A has opposite side length 8 and hypotenuse 17.

What is $\sin A$?

- A) $8/15$
- B) $15/17$
- C) $17/8$
- D) $8/17$

15

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

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

16

What is the midpoint of the segment with endpoints (0, -7) and (14, 3)?

- A) (8, -2)
- B) (7, -1)
- C) (14, 10)
- D) (7, -2)

17

The equation $x^2 - 8x + k = 0$ has exactly one solution. What is k ?

Response: _____

18

$$3x + 2y = 41$$

$$5x - y = 25$$

What is the value of y ?

Response: _____

19

If $f(t) = 20(3)^t$, what is $f(3)$?

Response: _____

20

The mean of 9, 15, 18, 19, and x is 17. What is x ?

Response: _____

21

The area of a circle is $k\pi$ and its radius is 7. What is k ?

Response: _____

22

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

Reading and Writing - Module 2

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

ANSWER KEY - MATH

Math - Module 1

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

Math - Module 2

1	D	12	A
2	B	13	D
3	B	14	D
4	B	15	C
5	A	16	D
6	A	17	16
7	D	18	10
8	C	19	540
9	A	20	24
10	C	21	49
11	D	22	144