# The SAT®

# Practice Test #1

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## CollegeBoard

# Math Test – No Calculator

## 25 MINUTES, 20 QUESTIONS

**Turn to Section 3 of your answer sheet to answer the questions in this section.**

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**DIRECTIONS**

**For questions 1-15**, solve each problem, choose the best answer from the choices provided, and fill in the corresponding circle on your answer sheet. **For questions 16-20**, solve the problem and enter your answer in the grid on the answer sheet. Please refer to the directions before question 16 on how to enter your answers in the grid. You may use any available space in your test booklet for scratch work.

**NOTES**

1. The use of a calculator **is not permitted**.

2. All variables and expressions used represent real numbers unless otherwise indicated.

3. Figures provided in this test are drawn to scale unless otherwise indicated.

4. All figures lie in a plane unless otherwise indicated.

5. Unless otherwise indicated, the domain of a given function $f$ is the set of all real numbers $x$ for which $f(x)$ is a real number.
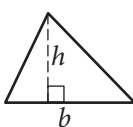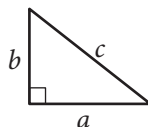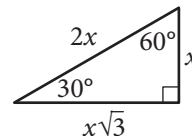
**REFERENCE**
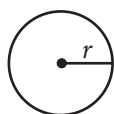
$A = \pi r^2$
$C = 2\pi r$
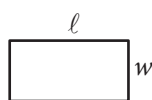
$A = \ell w$
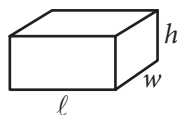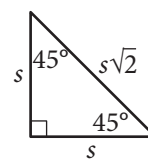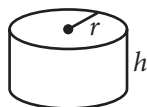
$A = \frac{1}{2}bh$

$c^2 = a^2 + b^2$

Special Right Triangles

$V = \ell wh$

$V = \pi r^2 h$

$V = \frac{4}{3}\pi r^3$

$V = \frac{1}{3}\pi r^2 h$

$V = \frac{1}{3}\ell wh$

The number of degrees of arc in a circle is 360.
The number of radians of arc in a circle is $2\pi$.
The sum of the measures in degrees of the angles of a triangle is 180.

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**34**

CONTINUE

### DIRECTIONS

**For questions 16–20,** solve the problem and enter your answer in the grid, as described below, on the answer sheet.

1. Although not required, it is suggested that you write your answer in the boxes at the top of the columns to help you fill in the circles accurately. You will receive credit only if the circles are filled in correctly.
2. Mark no more than one circle in any column.
3. No question has a negative answer.
4. Some problems may have more than one correct answer. In such cases, grid only one answer.
5. **Mixed numbers** such as $3\frac{1}{2}$ must be gridded as 3.5 or 7/2. (If [3 1 / 2] is entered into the grid, it will be interpreted as $\frac{31}{2}$, not $3\frac{1}{2}$.)
6. **Decimal answers:** If you obtain a decimal answer with more digits than the grid can accommodate, it may be either rounded or truncated, but it must fill the entire grid.

Answer: $\frac{7}{12}$

Write answer in boxes.

← Fraction line

Grid in result.

Answer: 2.5

← Decimal point

Acceptable ways to grid $\frac{2}{3}$ are:

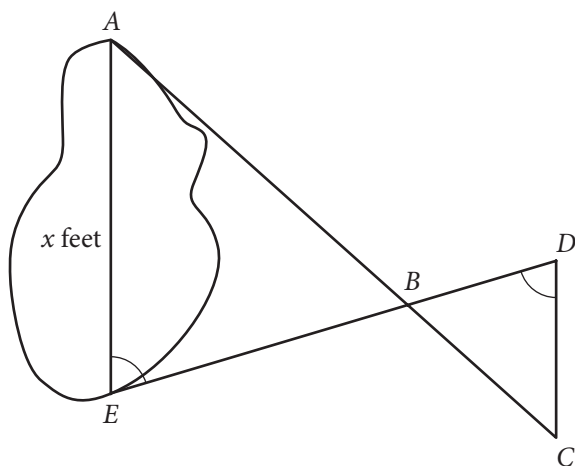Answer: 201 – either position is correct

**NOTE:** You may start your answers in any column, space permitting. Columns you don't need to use should be left blank.

CONTINUE

**16**

If $t > 0$ and $t^2 - 4 = 0$, what is the value of $t$ ?

**17**



A summer camp counselor wants to find a length, $x$, in feet, across a lake as represented in the sketch above. The lengths represented by $AB$, $EB$, $BD$, and $CD$ on the sketch were determined to be 1800 feet, 1400 feet, 700 feet, and 800 feet, respectively. Segments $AC$ and $DE$ intersect at $B$, and $\angle AEB$ and $\angle CDB$ have the same measure. What is the value of $x$ ?

**18**

$$x + y = -9$$
$$x + 2y = -25$$

According to the system of equations above, what is the value of $x$ ?

**19**

In a right triangle, one angle measures $x°$, where $\sin x° = \dfrac{4}{5}$. What is $\cos(90° - x°)$ ?

**20**

If $a = 5\sqrt{2}$ and $2a = \sqrt{2x}$, what is the value of $x$ ?

# STOP

**If you finish before time is called, you may check your work on this section only.**
**Do not turn to any other section.**