

SAT Math Practice Set

Algebra & Geometry · No-Calculator Section · 6 Questions · 12 minutes

Directions: Solve each problem and choose the best answer from the choices provided. You may use any available space for scratch work. Unless otherwise indicated, all variables and expressions used represent real numbers, all figures lie in a plane, and figures are not necessarily drawn to scale.

Question 1 · Linear equations · Easy

1. If $3x - 7 = 2x + 5$, what is the value of x ?

- A) -2
- B) 2
- C) 6
- D) 12

Question 2 · Systems of equations · Medium

2. The system of equations below has solution (x, y) .

$$2x + 3y = 13$$

$$4x - y = 5$$

What is the value of $x + y$?

- A) 3
- B) 4
- C) 5
- D) 6

Question 3 · Quadratics · Medium

3. The function f is defined by $f(x) = x^2 - 6x + 5$. For what value of x does f attain its minimum value?

- A) -3
- B) 0
- C) 3
- D) 5

Question 4 · Geometry · Medium

4. In triangle ABC, angle B is a right angle, $AB = 5$, and $BC = 12$. What is the length of AC?

- A) 7
- B) 13
- C) 17
- D) 60

Question 5 · Exponents & expressions · Hard

5. If $2^{x+1} = 32$, what is the value of x ?

- A) 3
- B) 4
- C) 5
- D) 6

Question 6 · Geometry · Hard

6. A circle in the xy -plane has center $(3, -2)$ and passes through the point $(7, 1)$. Which of the following is an equation of the circle?

- A) $(x - 3)^2 + (y + 2)^2 = 5$
- B) $(x - 3)^2 + (y + 2)^2 = 25$
- C) $(x + 3)^2 + (y - 2)^2 = 25$
- D) $(x - 3)^2 + (y - 2)^2 = 16$

Practice set prepared for tutoring use. Solutions are reviewed at the end of each session — students are encouraged to attempt each question independently first.