

SAT/ACT Chapter Test

For use after Chapter 5

1. What are all solutions of $x^2 - 5x + 4 = 0$?

- (A) 4, 1 (B) -4, -1
 (C) 2, 2 (D) -2, -2

2. What are all solutions of $x^2 = 16$?

- (A) 4 (B) -8, -2
 (C) 4, -4 (D) 0, 16

3. The graph of $y = x^2$ is a

- (A) circle. (B) line.
 (C) parabola. (D) rectangle.

4. In the quadratic formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a},$$

 $b^2 - 4ac$ is called the

- (A) denominator. (B) discriminant.
 (C) derivative. (D) domain.

5. $\sqrt{-9}$ is

- (A) rational. (B) irrational.
 (C) real. (D) imaginary.

6. If $\sqrt{-1} = i$, then $i^2 =$ _____

- (A) 1. (B) -1. (C) $\sqrt{1}$. (D) $\sqrt{-1}$.

7. Which are all solutions of $x^2 + 6x - 3 = 0$?

- (A) 3, -3
 (B) $3 + 2\sqrt{3}$, $3 - 2\sqrt{3}$
 (C) $-3 + 2\sqrt{3}$, $-3 - 2\sqrt{3}$
 (D) $-3 + \sqrt{13}$, $-3 - \sqrt{13}$

Quantitative Comparison In Exercises 8–10, choose the statement that is true about the given quantities.

- (A) The quantity in column A is greater.
 (B) The quantity in column B is greater.
 (C) The two quantities are equal.
 (D) The relationship cannot be determined from the given information.

8.

Column A	Column B
$(\sqrt{9})^2$	$(3)^2$

- (A) (B) (C) (D)

9.

Column A	Column B
$16i^2$	16

- (A) (B) (C) (D)

10.

Column A	Column B
$b^2 - 4ac$	$b^2 - 4ac$
where $a = 1$ $b = -2$ $c = -3$	where $a = -1$ $b = 2$ $c = 3$

- (A) (B) (C) (D)