

**Name:**  
**Class:**  
**Date:**

Question #1

**Which function has two negative roots?**

- A)  $f(x) = -x^2 - 8x + 12$
- B)  $f(x) = x^2 - 5x - 14$
- C)  $f(x) = x^2 - 10x + 16$
- D)  $f(x) = x^2 + 9x + 18$

Question #2

**Which of the following quadratic functions has roots  $x = 3$  and  $x = -1$ ?**

- A)  $x^2 - 2x - 3$
- B)  $x^2 - 4x + 3$
- C)  $x^2 + 2x - 3$
- D)  $x^2 + 4x + 3$

Question #3

**What is the solution set for the equation  $x^2 - 3x - 18 = 0$ ?**

- A)  $\{-6, -3\}$
- B)  $\{-6, 3\}$
- C)  $\{-3, 6\}$
- D)  $\{3, 6\}$

Question #4

Solve  $2x^2 - 5x - 3 = 0$  for  $x$ .

- A)  $x = -\frac{1}{2}$  or  $x = -3$
- B)  $x = -\frac{1}{2}$  or  $x = 3$
- C)  $x = \frac{1}{2}$  or  $x = -3$
- D)  $x = \frac{1}{2}$  or  $x = 3$

Question #5

What is the solution set to the equation  $x^2 - 4x + 5 = 50$ ?

- A)  $\{-9, -5\}$
- B)  $\{-9, 5\}$
- C)  $\{-5, 9\}$
- D)  $\{5, 9\}$

Question #6

Which equation has roots of  $-1$  and  $2$ ?

- A)  $(x - 1)(x - 2) = 0$
- B)  $(x - 1)(x + 2) = 0$
- C)  $(x + 1)(x - 2) = 0$
- D)  $(x + 1)(x + 2) = 0$

Question #7

Curtis solves the quadratic equation  $x^2 + 10x + 24 = 0$  by completing the square. His work is shown below.

Step 1:  $x^2 + 10x = -24$

Step 2:  $x^2 + 10x + 25 = -24 + 25$

Step 3:  $(x + 5)^2 = 1$

Step 4: ?

Which of the following equations should represent Step 4?

A)  $x + 5 = 0$

B)  $\sqrt{(x + 5)^2} = \pm\sqrt{1}$

C)  $(x + 5)^2 - 1 = 0$

D)  $\sqrt{(x + 5)^2 - 1} = \sqrt{0}$

Question #8

Solve  $3x^2 + 7x - 6 = 0$  for  $x$ .

A)  $x = \frac{2}{3}$  or  $x = 3$

B)  $x = -\frac{2}{3}$  or  $x = 3$

C)  $x = \frac{2}{3}$  or  $x = -3$

D)  $x = -\frac{2}{3}$  or  $x = -3$

Question #9

Myra's tutor used these steps to solve the problem  $10x^2 = 90$ .

- Divide both sides by 10 to get  $x^2 = 9$ .
- Take square roots on both sides to get  $x = \pm 3$ .

Using this method, what is the solution to  $7x^2 = 1008$ ?

- A)  $\pm 3$
- B)  $\pm 7$
- C)  $\pm 12$
- D)  $\pm 144$

Question #10

A softball league has a season that consists of 56 games. The equation below represents the relationship between the number of teams in the league,  $x$ , and the total number of games played during the season.

$$56 = x^2 - x$$

How many teams are in the league?

- A) 4
- B) 7
- C) 8
- D) 14

