



9-4 Reteach to Build Understanding

Solving Quadratic Equations Using Square Roots

1. Match each equation with its solution(s).

$x^2 = 9$

no solution

$7x^2 - 6 = 15$

 $x = 0$

$4x^2 + 19 = 7$

 $x = \pm\sqrt{3}$

$3x^2 + 4 = 4$

 $x = \pm 3$

2. A student made an error when solving the quadratic equation. Find and correct the error the student made.

$$-5x^2 + 11 = -14$$

$$-5x^2 + 11 - 11 = -14 - 11$$

$$-5x^2 = -25$$

$$x^2 = 5$$

$$x = \sqrt{5}$$

3. Find the solution of the quadratic equation $9x^2 - 4 = 23$ using square roots. Approximate if necessary.

Write in the form $x^2 = a$, where a is a real number.

$$9x^2 - 4 + 4 = 23 + 4$$

$$9x^2 = 27$$

$$x^2 = 3$$

Take the square root of each side.

$$\sqrt{x^2} = \underline{\hspace{2cm}}$$

$$x = \underline{\hspace{2cm}}$$

The approximate solutions of the quadratic equation $9x^2 - 4 = 23$ would be between _____ and _____, since _____ is between _____ and _____.