

Practice 11.1

Name(s) _____

Use the square root property to solve the equation.

1) $x^2 - 22 = 0$

2) $x^2 + 144 = 0$

3) $7x^2 = 100$

4) $(3x + 4)^2 = 5$

Add the proper constant to each binomial so that the resulting trinomial is a perfect square trinomial. Then factor the trinomial.

5) $x^2 - 4x + \underline{\hspace{2cm}}$

6) $x^2 + \frac{1}{3}x + \underline{\hspace{2cm}}$

Solve the equation by completing the square.

7) $x^2 + 18x + 58 = 0$

8) $x^2 + 10x = -6$

9) $16x^2 - 5x + 1 = 0$

Solve.

- 10) An isosceles right triangle has legs of equal length. If the hypotenuse is 22 inches long, find the length of each leg.

Answer Key

Testname: FRCC_11.1WKS

1) $-\sqrt{22}, \sqrt{22}$

2) $-12i, 12i$

3) $-\frac{10\sqrt{7}}{7}, \frac{10\sqrt{7}}{7}$

4) $\frac{-4 - \sqrt{5}}{3}, \frac{-4 + \sqrt{5}}{3}$

5) $x^2 - 4x + 4 = (x - 2)^2$

6) $x^2 + \frac{1}{3}x + \frac{1}{36} = \left(x + \frac{1}{6}\right)^2$

7) $-9 - \sqrt{23}, -9 + \sqrt{23}$

8) $-5 - \sqrt{19}, -5 + \sqrt{19}$

9) $\frac{5 - i\sqrt{39}}{32}, \frac{5 + i\sqrt{39}}{32}$

10) $11\sqrt{2}$ in.