

Thinking Classroom

Bubble Key

Using the Square Root Property

10.1

Solving Equations by Completing the Square 10.2

$$-7, -1$$

$$2 \pm \sqrt{7}$$

$$-3, 6$$

$$\pm \sqrt{13}$$

$$-12, 4$$

$$-6, -3$$

$$-\frac{5}{2} + \frac{\sqrt{13}}{2} \approx -0.70$$

$$-\frac{3}{2} + \frac{\sqrt{21}}{6} \approx -0.74$$

$$-4, 9$$

$$-\frac{5}{2} - \frac{\sqrt{13}}{2} \approx -4.30$$

$$-\frac{3}{2} - \frac{\sqrt{21}}{6} \approx -2.26$$

$$-\frac{1}{2} \pm \frac{5\sqrt{2}}{2}$$

$$\frac{3}{8} + \frac{\sqrt{41}}{8} \approx 1.18$$

$$\frac{3}{8} - \frac{\sqrt{41}}{8} \approx -0.43$$

$$-4 \pm 3\sqrt{3}$$

$$-4 + 2\sqrt{5} \approx 0.47$$

$$-4 - 2\sqrt{5} \approx -8.47$$

Thinking Classroom

10.1, 10.2 sq. Root Prop.
Complete Square

Solve by

completing the square and then by factoring

19. $4x^2 - 52 = 0$

21. $(x + 4)^2 = 64$



MILD

27. $x^2 - 3x - 18 = 0$

28. $t^2 - 5t - 36 = 0$

29. $x^2 + 8x + 7 = 0$

30. $a^2 + 9a + 18 = 0$



SPICY

Completing the Square In Exercises 33–38, solve the equation by completing the square. Give the solutions in exact form and in decimal form rounded to two decimal places.

35. $y^2 + 8y - 4 = 0$

36. $m^2 + 5m + 3 = 0$

37. $3x^2 + 9x + 5 = 0$

38. $4z^2 - 3z - 2 = 0$



GHOST PEPPER