

# SM2 6.3: Quadratic Formula

Name \_\_\_\_\_ ID: 1

Date \_\_\_\_\_ Period \_\_\_\_\_

Solve each equation with the quadratic formula.

1)  $4x^2 + 11 = 0$

$$\left\{ \frac{i\sqrt{11}}{2}, -\frac{i\sqrt{11}}{2} \right\}$$

3)  $8a^2 - 10a - 2 = 0$

$$\left\{ \frac{5 + \sqrt{41}}{8}, \frac{5 - \sqrt{41}}{8} \right\}$$

5)  $2n^2 - 19 = -8$

$$\left\{ \frac{\sqrt{22}}{2}, -\frac{\sqrt{22}}{2} \right\}$$

7)  $-6p^2 + 4p + 28 = 4$

$$\left\{ \frac{1 - \sqrt{37}}{3}, \frac{1 + \sqrt{37}}{3} \right\}$$

9)  $7b^2 + 2 = -7b$

$$\left\{ \frac{-7 + i\sqrt{7}}{14}, \frac{-7 - i\sqrt{7}}{14} \right\}$$

11)  $11r^2 + 2 = -3r$

$$\left\{ \frac{-3 + i\sqrt{79}}{22}, \frac{-3 - i\sqrt{79}}{22} \right\}$$

13)  $-4n^2 + 15 = 0$

$$\left\{ -\frac{\sqrt{15}}{2}, \frac{\sqrt{15}}{2} \right\}$$

15)  $12a^2 + 2a - 9 = -5a$

$$\left\{ \frac{-7 + \sqrt{481}}{24}, \frac{-7 - \sqrt{481}}{24} \right\}$$

17)  $\frac{1}{3}x^2 + 4x - 9 = 7$

$$\{-6 + 2\sqrt{21}, -6 - 2\sqrt{21}\}$$

2)  $10k^2 + 9k - 10 = 0$

$$\left\{ \frac{-9 + \sqrt{481}}{20}, \frac{-9 - \sqrt{481}}{20} \right\}$$

4)  $2x^2 - 6x + 8 = 0$

$$\left\{ \frac{3 + i\sqrt{7}}{2}, \frac{3 - i\sqrt{7}}{2} \right\}$$

6)  $-x^2 + 4x - 13 = -9$

$$\{2\}$$

8)  $-m^2 - 10m - 29 = -5$

$$\{-6, -4\}$$

10)  $2x^2 + 6x = 80$

$$\{5, -8\}$$

12)  $-7n^2 + 12n = 12$

$$\left\{ \frac{6 - 4i\sqrt{3}}{7}, \frac{6 + 4i\sqrt{3}}{7} \right\}$$

14)  $-17x^2\sqrt{33} + 11x + 9 = -5v^2 + 9v$

$$\left\{ -\frac{i\sqrt{33}}{6}, \frac{i\sqrt{33}}{6} \right\}$$

16)  $-12x^2 + 12 = -2x$

$$\left\{ \frac{1 - \sqrt{145}}{12}, \frac{1 + \sqrt{145}}{12} \right\}$$

18)  $-\frac{4}{5}x^2 - 2x - \frac{7}{5} = 0$

$$\left\{ \frac{-5 + i\sqrt{3}}{4}, \frac{-5 - i\sqrt{3}}{4} \right\}$$