

Name : _____

Score : _____

Teacher : _____

Date : _____

The Quadratic Formula

Solve each equation with the quadratic formula.

1) $n^2 + 2n - 80 = 0$

$$n = \{-10, 8\}$$

6) $15r^2 - 19r = 8$

$$r = \left\{ \frac{-1}{3}, \frac{8}{5} \right\}$$

2) $n^2 - 13n + 40 = 0$

$$n = \{5, 8\}$$

7) $s^2 - 4s - 4 = 8$

$$s = \{6, -2\}$$

3) $24h^2 - 62h + 40 = 0$

$$h = \left\{ \frac{5}{4}, \frac{4}{3} \right\}$$

8) $10n^2 + 33n - 5 = 2$

$$n = \left\{ \frac{-7}{2}, \frac{1}{5} \right\}$$

4) $12q^2 - 47q + 26 = -19$

$$q = \left\{ \frac{9}{4}, \frac{5}{3} \right\}$$

9) $12w^2 + 84w + 120 = 0$

$$w = \{-2, -5\}$$

5) $b^2 + 18b + 55 = -25$

$$b = \{-8, -10\}$$

10) $g^2 - 12g = -27$

$$g = \{3, 9\}$$



Using the Quadratic Formula

Solve each equation with the quadratic formula.

1) $m^2 - 5m - 14 = 0$

$\{7, -2\}$

2) $b^2 - 4b + 4 = 0$

$\{2\}$

3) $2m^2 + 2m - 12 = 0$

$\{2, -3\}$

4) $2x^2 - 3x - 5 = 0$

$\left\{\frac{5}{2}, -1\right\}$

5) $x^2 + 4x + 3 = 0$

$\{-1, -3\}$

6) $2x^2 + 3x - 20 = 0$

$\left\{\frac{5}{2}, -4\right\}$

7) $4b^2 + 8b + 7 = 4$

$\left\{-\frac{1}{2}, -\frac{3}{2}\right\}$

8) $2m^2 - 7m - 13 = -10$

$\left\{\frac{7 + \sqrt{73}}{4}, \frac{7 - \sqrt{73}}{4}\right\}$

9) $2x^2 - 3x - 15 = 5$

$$\left\{4, -\frac{5}{2}\right\}$$

10) $x^2 + 2x - 1 = 2$

$$\{1, -3\}$$

11) $2k^2 + 9k = -7$

$$\left\{-1, -\frac{7}{2}\right\}$$

12) $5r^2 = 80$

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

13) $2x^2 - 36 = x$

$$\left\{\frac{9}{2}, -4\right\}$$

14) $5x^2 + 9x = -4$

$$\left\{-\frac{4}{5}, -1\right\}$$

15) $k^2 - 31 - 2k = -6 - 3k^2 - 2k$

$$\left\{\frac{5}{2}, -\frac{5}{2}\right\}$$

16) $9n^2 = 4 + 7n$

$$\left\{\frac{7 + \sqrt{193}}{18}, \frac{7 - \sqrt{193}}{18}\right\}$$

17) $8n^2 + 4n - 16 = -n^2$

$$\left\{\frac{-2 + 2\sqrt{37}}{9}, \frac{-2 - 2\sqrt{37}}{9}\right\}$$

18) $8n^2 + 7n - 15 = -7$

$$\left\{\frac{-7 + \sqrt{305}}{16}, \frac{-7 - \sqrt{305}}{16}\right\}$$