Name : _____ Score : _____

Teacher : _____ Date : _____

The Quadratic Formula

Solve each equation with the quadratic formula.

1) $15w^2 + 100w - 36 = 52$

2) $20w^2 + 107w = 12$

3) $n^2 - 32n - 99 = 9$

4) $k^2 + 15k + 50 = 0$

5) $8g^2 + 24g - 14 = 0$

6) $p^2 + 29p + 33 = 0$

7) $12q^2 - 55q = 40$

8) $d^2 + 14d = 24$

9) $d^2 + 24d - 19 = 29$

10) $30x^2 + 126x + 12 = -8$

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The Quadratic Formula

Solve each equation with the quadratic formula.

1) $15w^2 + 100w - 36 = 52$

$w = \left\{ \frac{-50 + 2\sqrt{955}}{15}, \frac{-50 - 2\sqrt{955}}{15} \right\}$

2) $20w^2 + 107w = 12$

$w = \left\{ \frac{-107 + \sqrt{12409}}{40}, \frac{-107 - \sqrt{12409}}{40} \right\}$

3) $n^2 - 32n - 99 = 9$

$n = \left\{ 16 + 2\sqrt{91}, 16 - 2\sqrt{91} \right\}$

4) $k^2 + 15k + 50 = 0$

$k = \left\{ -10, -5 \right\}$

5) $8g^2 + 24g - 14 = 0$

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

6) $p^2 + 29p + 33 = 0$

$p = \left\{ \frac{-29 + \sqrt{709}}{2}, \frac{-29 - \sqrt{709}}{2} \right\}$

7) $12q^2 - 55q = 40$

$q = \left\{ \frac{55 + \sqrt{4945}}{24}, \frac{55 - \sqrt{4945}}{24} \right\}$

8) $d^2 + 14d = 24$

$d = \left\{ -7 + \sqrt{73}, -7 - \sqrt{73} \right\}$

9) $d^2 + 24d - 19 = 29$

$d = \left\{ -12 + 8\sqrt{3}, -12 - 8\sqrt{3} \right\}$

10) $30x^2 + 126x + 12 = -8$

$x = \left\{ \frac{-63 + \sqrt{3369}}{30}, \frac{-63 - \sqrt{3369}}{30} \right\}$