Students taking Pre-Cal, Stat, Adv. Topics, College Readiness Name_____

Assignment 6: Solve Quadratic Equations

Solve each equation by factoring.

1) $a^2 + 2a = 35$

2) $n^2 = 12 - 4n$

3) $k^2 = 2k + 48$

4) $x^2 + x = 12$

5) $x^2 - 36 = 0$

Solve each equation by taking square roots.

6) $9m^2 + 2 = 101$

7) $8r^2 - 8 = 392$

8) $6x^2 + 8 = 110$

9) $5n^2 - 9 = 401$

10) $3b^2 - 6 = 144$

Solve each equation with the quadratic formula.

11) $4x^2 + 5x = 125$

12) $6v^2 = v + 100$

13) $9a^2 = -2a + 22$

14) $4x^2 + 6x = -2$

15) $k^2 = 9$

Solve each equation by completing the square.

16) $p^2 - 18p - 94 = -6$

17) $3x^2 + 6x - 42 = 3$

18) $2n^2 - 4n - 74 = 6$

19) $m^2 + 10m - 25 = 4$

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Assignment 6: Solve Quadratic Equations

Solve each equation by factoring.

1) $a^2 + 2a = 35$

$\{5, -7\}$

2) $n^2 = 12 - 4n$

$\{-6, 2\}$

3) $k^2 = 2k + 48$

$\{8, -6\}$

4) $x^2 + x = 12$

$\{-4, 3\}$

5) $x^2 - 36 = 0$

$\{6, -6\}$

Solve each equation by taking square roots.

6) $9m^2 + 2 = 101$

$\{\sqrt{11}, -\sqrt{11}\}$

7) $8r^2 - 8 = 392$

$\{5\sqrt{2}, -5\sqrt{2}\}$

8) $6x^2 + 8 = 110$

$\{\sqrt{17}, -\sqrt{17}\}$

9) $5n^2 - 9 = 401$

$\{\sqrt{82}, -\sqrt{82}\}$

10) $3b^2 - 6 = 144$

$\{5\sqrt{2}, -5\sqrt{2}\}$

Solve each equation with the quadratic formula.

11) $4x^2 + 5x = 125$

$\left\{5, -\frac{25}{4}\right\}$

12) $6v^2 = v + 100$

$\left\{\frac{25}{6}, -4\right\}$

13) $9a^2 = -2a + 22$

$\left\{\frac{-1 + \sqrt{199}}{9}, \frac{-1 - \sqrt{199}}{9}\right\}$

14) $4x^2 + 6x = -2$

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

15) $k^2 = 9$

$\{3, -3\}$

Solve each equation by completing the square.

16) $p^2 - 18p - 94 = -6$

$\{22, -4\}$

17) $3x^2 + 6x - 42 = 3$

$\{3, -5\}$

18) $2n^2 - 4n - 74 = 6$

$\{1 + \sqrt{41}, 1 - \sqrt{41}\}$

19) $m^2 + 10m - 25 = 4$

$\{-5 + 3\sqrt{6}, -5 - 3\sqrt{6}\}$