 Name_____

Solving Quadratic Equations By Completing the Square Date_____ Period____

Solve each equation by completing the square.

1) $v^2 + 10v - 21 = 0$

2) $b^2 - 4b - 12 = 0$

3) $v^2 - 14v - 44 = 0$

4) $v^2 - 2v - 35 = 0$

5) $r^2 + 4r - 56 = 0$

6) $x^2 - 12x - 10 = 0$

7) $n^2 - 4n + 57 = -5$

8) $n^2 - 4n + 5 = 8$

9) $n^2 - 95 = 14n$

10) $n^2 = -93 - 2n$

11) $9n^2 = -77 + 18n$

12) $9v^2 + 5 = 18v$

13) $4n^2 + 31 = -8n$

14) $6k^2 = -12k + 18$

15) $9m^2 - 20m - 21 = 0$

16) $10x^2 - 4x - 32 = 0$

17) $3x^2 + 9x + 9 = 3$

18) $4n^2 + 4n = -24$

Solving Quadratic Equations By Completing the Square Date_____ Period____

Solve each equation by completing the square.

1) $v^2 + 10v - 21 = 0$

$\{-5 + \sqrt{46}, -5 - \sqrt{46}\}$

2) $b^2 - 4b - 12 = 0$

$\{6, -2\}$

3) $v^2 - 14v - 44 = 0$

$\{7 + \sqrt{93}, 7 - \sqrt{93}\}$

4) $v^2 - 2v - 35 = 0$

$\{7, -5\}$

5) $r^2 + 4r - 56 = 0$

$\{-2 + 2\sqrt{15}, -2 - 2\sqrt{15}\}$

6) $x^2 - 12x - 10 = 0$

$\{6 + \sqrt{46}, 6 - \sqrt{46}\}$

7) $n^2 - 4n + 57 = -5$

$\{2 + i\sqrt{58}, 2 - i\sqrt{58}\}$

8) $n^2 - 4n + 5 = 8$

$\{2 + \sqrt{7}, 2 - \sqrt{7}\}$

9) $n^2 - 95 = 14n$

$\{19, -5\}$

10) $n^2 = -93 - 2n$

$\{-1 + 2i\sqrt{23}, -1 - 2i\sqrt{23}\}$

11) $9n^2 = -77 + 18n$

$\left\{\frac{3 + 2i\sqrt{17}}{3}, \frac{3 - 2i\sqrt{17}}{3}\right\}$

12) $9v^2 + 5 = 18v$

$\left\{\frac{5}{3}, \frac{1}{3}\right\}$

13) $4n^2 + 31 = -8n$

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

14) $6k^2 = -12k + 18$

$\{1, -3\}$

15) $9m^2 - 20m - 21 = 0$

$\left\{3, -\frac{7}{9}\right\}$

16) $10x^2 - 4x - 32 = 0$

$\left\{2, -\frac{8}{5}\right\}$

17) $3x^2 + 9x + 9 = 3$

$\{-1, -2\}$

18) $4n^2 + 4n = -24$

$\left\{\frac{-1 + i\sqrt{23}}{2}, \frac{-1 - i\sqrt{23}}{2}\right\}$