Math 2 Name_____

Unit 4.2 Solve by Completing the square Examples

Period____

Solve each equation by completing the square.

1) $x^2 + 8x - 18 = 0$

2) $p^2 + 16p + 28 = 0$

3) $7x^2 + 14x - 21 = 0$

4) $4r^2 + 8r - 45 = 0$

5) $x^2 + 20x + 103 = 4$

6) $v^2 + 14v + 43 = 3$

7) $8a^2 - 16a - 44 = -6$

8) $7x^2 + 14x - 64 = -8$

9) $n^2 - 49 = -6n$

10) $r^2 - 2r = 99$

11) $7a^2 = 14a - 2$

12) $7v^2 = 16 + 14v$

13) $n^2 - 85 = 2n$

14) $n^2 - 1 = 1 + 8n$

15) $20r^2 - 20r - 91 = 10r^2 - 3$

16) $13n^2 - 7n - 21 = 6 + 5n^2 + 9n$

Math 2 Name_____

Unit 4.2 Solve by Completing the square Examples

Period____

Solve each equation by completing the square.

1) $x^2 + 8x - 18 = 0$

$\{-4 + \sqrt{34}, -4 - \sqrt{34}\}$

2) $p^2 + 16p + 28 = 0$

$\{-2, -14\}$

3) $7x^2 + 14x - 21 = 0$

$\{1, -3\}$

4) $4r^2 + 8r - 45 = 0$

$\left\{\frac{5}{2}, -\frac{9}{2}\right\}$

5) $x^2 + 20x + 103 = 4$

$\{-9, -11\}$

6) $v^2 + 14v + 43 = 3$

$\{-4, -10\}$

7) $8a^2 - 16a - 44 = -6$

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

8) $7x^2 + 14x - 64 = -8$

$\{2, -4\}$

9) $n^2 - 49 = -6n$

$\{-3 + \sqrt{58}, -3 - \sqrt{58}\}$

10) $r^2 - 2r = 99$

$\{11, -9\}$

11) $7a^2 = 14a - 2$

$\left\{\frac{7 + \sqrt{35}}{7}, \frac{7 - \sqrt{35}}{7}\right\}$

12) $7v^2 = 16 + 14v$

$\left\{\frac{7 + \sqrt{161}}{7}, \frac{7 - \sqrt{161}}{7}\right\}$

13) $n^2 - 85 = 2n$

$\{1 + \sqrt{86}, 1 - \sqrt{86}\}$

14) $n^2 - 1 = 1 + 8n$

$\{4 + 3\sqrt{2}, 4 - 3\sqrt{2}\}$

15) $20r^2 - 20r - 91 = 10r^2 - 3$

$\left\{\frac{5 + 7\sqrt{5}}{5}, \frac{5 - 7\sqrt{5}}{5}\right\}$

16) $13n^2 - 7n - 21 = 6 + 5n^2 + 9n$

$\left\{\frac{4 + \sqrt{70}}{4}, \frac{4 - \sqrt{70}}{4}\right\}$