

1.4 $a > 1$ and Completing the Square

Date _____

Solve each equation by factoring.

1) $8b^2 + 21b + 10 = 0$

2) $3r^2 + 13r + 4 = 0$

3) $3a^2 + 4a - 32 = 0$

4) $7r^2 + 26r - 8 = 0$

5) $5x^2 + 19x - 4 = 0$

6) $5n^2 - 13n + 8 = 0$

7) $3a^2 + 20a + 12 = 0$

8) $2n^2 + n - 3 = 0$

Solve each equation by completing the square.

9) $p^2 - 12p - 75 = 0$

10) $k^2 + 12k + 20 = 0$

$$11) k^2 - 8k - 20 = 0$$

$$12) x^2 + 6x - 16 = 0$$

$$13) n^2 - 20n - 96 = 0$$

$$14) k^2 + 18k + 41 = 0$$

$$15) x^2 + 6x - 59 = 0$$

$$16) n^2 + 2n - 34 = 0$$

$$17) 5n^2 - 20n - 28 = -3$$

$$18) 4x^2 - 16x - 55 = -7$$

$$19) 7b^2 + 14b - 29 = -8$$

$$20) 4x^2 - 8x + 7 = 4$$

Answers to 1.4 $a > 1$ and Completing the Square

- 1) $\left\{-\frac{5}{8}, -2\right\}$ 2) $\left\{-\frac{1}{3}, -4\right\}$ 3) $\left\{\frac{8}{3}, -4\right\}$ 4) $\left\{\frac{2}{7}, -4\right\}$
5) $\left\{\frac{1}{5}, -4\right\}$ 6) $\left\{\frac{8}{5}, 1\right\}$ 7) $\left\{-\frac{2}{3}, -6\right\}$ 8) $\left\{-\frac{3}{2}, 1\right\}$
9) $\{6 + \sqrt{111}, 6 - \sqrt{111}\}$ 10) $\{-2, -10\}$ 11) $\{10, -2\}$
12) $\{2, -8\}$ 13) $\{24, -4\}$ 14) $\{-9 + 2\sqrt{10}, -9 - 2\sqrt{10}\}$
15) $\{-3 + 2\sqrt{17}, -3 - 2\sqrt{17}\}$ 16) $\{-1 + \sqrt{35}, -1 - \sqrt{35}\}$ 17) $\{5, -1\}$
18) $\{6, -2\}$ 19) $\{1, -3\}$ 20) $\left\{\frac{3}{2}, \frac{1}{2}\right\}$