

Assignment

Date _____ Period _____

Solve each equation by completing the square.

1) $m^2 + 16m + 28 = 0$

2) $n^2 + 4n - 12 = 0$

3) $n^2 + 4n - 21 = 0$

4) $k^2 - 10k - 11 = 0$

5) $8x^2 + 16x - 96 = -6$

6) $k^2 + 20k + 11 = 10$

Solve each equation by factoring.

7) $n^2 - 14n = -48$

8) $x^2 - 42 = x$

9) $n^2 + 8n = 0$

10) $5n^2 - 60n = -175$

11) $4 + 10k = -k - 7k^2$

12) $-3n^2 + 18n + 21 = -6n^2 + 2n$

Solve each equation by taking square roots.

13) $4x^2 = 1$

14) $49m^2 = 64$

15) $n^2 + 2 = -2$

16) $49x^2 = 49$

17) $2v^2 - 9 = 43$

18) $8x^2 - 6 = -20$

Solve each equation with the quadratic formula.

19) $4k^2 - 25 = 0$

20) $n^2 - 9 = 0$

21) $10m^2 - 19 = 2m$

22) $8n^2 - 18 = 5n$

23) $-2b^2 - 7b = -5b^2 + 20 - b$

24) $-77 - 18n = -3n^2 - 8n$

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Date _____ Period _____

Solve each equation by completing the square.

1) $m^2 + 16m + 28 = 0$

$\{-2, -14\}$

2) $n^2 + 4n - 12 = 0$

$\{2, -6\}$

3) $n^2 + 4n - 21 = 0$

$\{3, -7\}$

4) $k^2 - 10k - 11 = 0$

$\{11, -1\}$

5) $8x^2 + 16x - 96 = -6$

$\{2.5, -4.5\}$

6) $k^2 + 20k + 11 = 10$

$\{-0.05, -19.95\}$

Solve each equation by factoring.

7) $n^2 - 14n = -48$

$\{6, 8\}$

8) $x^2 - 42 = x$

$\{-6, 7\}$

9) $n^2 + 8n = 0$

$\{-8, 0\}$

10) $5n^2 - 60n = -175$

$\{7, 5\}$

11) $4 + 10k = -k - 7k^2$

$\left\{-\frac{4}{7}, -1\right\}$

12) $-3n^2 + 18n + 21 = -6n^2 + 2n$

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

Solve each equation by taking square roots.

13) $4x^2 = 1$

$\{0.5, -0.5\}$

14) $49m^2 = 64$

$\{1.143, -1.143\}$

15) $n^2 + 2 = -2$

No solution.

16) $49x^2 = 49$

$\{1, -1\}$

17) $2v^2 - 9 = 43$

$\{5.099, -5.099\}$

18) $8x^2 - 6 = -20$

No solution.

Solve each equation with the quadratic formula.

19) $4k^2 - 25 = 0$

$\{2.5, -2.5\}$

20) $n^2 - 9 = 0$

$\{3, -3\}$

21) $10m^2 - 19 = 2m$

$\{1.482, -1.282\}$

22) $8n^2 - 18 = 5n$

$\{1.845, -1.22\}$

23) $-2b^2 - 7b = -5b^2 + 20 - b$

$\left\{\frac{3 + \sqrt{69}}{3}, \frac{3 - \sqrt{69}}{3}\right\}$

24) $-77 - 18n = -3n^2 - 8n$

$\left\{7, -3\frac{2}{3}\right\}$