

ES 6 Assignment #4: Solving Quadratic Equations

Date _____ Period _____

Solve each equation by factoring.

1) $(m + 2)(m + 1) = 0$

2) $(n - 4)(3n - 4) = 0$

3) $(x - 5)(x - 2) = 0$

4) $(n + 4)(4n + 3) = 0$

5) $4n^2 + 16n + 16 = 0$

6) $5a^2 + 20a - 160 = 0$

7) $x^2 + 4x = 0$

8) $5a^2 - 60a + 180 = 0$

9) $4n^2 = 12n - 8$

10) $6p^2 - 12p = 18$

11) $n^2 + 5n = 0$

12) $x^2 = 4x$

13) $245a^2 - 120 = -175a$

14) $-99 - 55n = 6 - 10n^2$

15) $3n^2 + 27n + 30 = 4n$

16) $-1 - 7m = -6m - 2m^2$

Solve each equation by taking square roots. Leave your answer in simplest radical form.

17) $-3m^2 = 144$

18) $16v^2 = 49$

19) $n^2 - 5 = -5$

20) $r^2 - 7 = -6$

21) $7n^2 + 3 = 143$

22) $3n^2 - 1 = 191$

23) $4v^2 + 5 = 181$

24) $9x^2 + 4 = 121$

25) $13x^2 - 17 = 685$

26) $11x^2 - 17 = -314$

27) $2n^2 + 2 = 20$

28) $9n^2 - 14 = -10$

Answers to ES 6 Assignment #4: Solving Quadratic Equations

1) $\{-2, -1\}$

2) $\left\{4, \frac{4}{3}\right\}$

3) $\{5, 2\}$

4) $\left\{-4, -\frac{3}{4}\right\}$

5) $\{-2\}$

6) $\{4, -8\}$

7) $\{-4, 0\}$

8) $\{6\}$

9) $\{1, 2\}$

10) $\{3, -1\}$

11) $\{-5, 0\}$

12) $\{4, 0\}$

13) $\left\{-\frac{8}{7}, \frac{3}{7}\right\}$

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

15) $\left\{-\frac{5}{3}, -6\right\}$

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

17) No solution.

18) $\left\{1\frac{3}{4}, -1\frac{3}{4}\right\}$

19) $\{0\}$

20) $\{1, -1\}$

21) $\{2\sqrt{5}, -2\sqrt{5}\}$

22) $\{8, -8\}$

23) $\{2\sqrt{11}, -2\sqrt{11}\}$

24) $\{\sqrt{13}, -\sqrt{13}\}$

25) $\{3\sqrt{6}, -3\sqrt{6}\}$

26) No solution.

27) $\{3, -3\}$

28) $\left\{\frac{2}{3}, -\frac{2}{3}\right\}$