

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $12b^2 = 1$

2) $5n^2 - 44 = 9n$

3) $6n^2 - 22 = 11n$

4) $4x^2 - 9x = 3$

5) $9x^2 - 10x = 6$

6) $11m^2 - 11m = 10$

7) $10x^2 - 17 = -2x$

8) $4k^2 - 11k = -2$

9) $8p^2 - 13 = -10p$

10) $2x^2 - 99 = 7x$

11) $4k^2 - 7 = -9k$

12) $3a^2 = 27$

13) $b^2 - 11 = -10b$

14) $10r^2 - 9 = 0$

15) $4a^2 - 12a = 16$

16) $4n^2 = -12n + 6$

17) $4r^2 = 8$

18) $6b^2 - 2b = 3$

19) $x^2 - 49 = 0$

20) $6a^2 - 1 = -5a$

21) $10n^2 = 3n + 2$

22) $x^2 - 25 = 0$

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $12b^2 = 1$

$\{0.289, -0.289\}$

2) $5n^2 - 44 = 9n$

$\{4, -2.2\}$

3) $6n^2 - 22 = 11n$

$\{3.04, -1.206\}$

4) $4x^2 - 9x = 3$

$\{2.545, -0.295\}$

5) $9x^2 - 10x = 6$

$\{1.543, -0.432\}$

6) $11m^2 - 11m = 10$

$\{1.577, -0.577\}$

7) $10x^2 - 17 = -2x$

$\{1.208, -1.408\}$

8) $4k^2 - 11k = -2$

$\{2.554, 0.196\}$

9) $8p^2 - 13 = -10p$

$\{0.795, -2.045\}$

10) $2x^2 - 99 = 7x$

$\{9, -5.5\}$

11) $4k^2 - 7 = -9k$

$\{0.612, -2.862\}$

12) $3a^2 = 27$

$\{3, -3\}$

13) $b^2 - 11 = -10b$

$\{1, -11\}$

14) $10r^2 - 9 = 0$

$\{0.949, -0.949\}$

15) $4a^2 - 12a = 16$

$\{4, -1\}$

16) $4n^2 = -12n + 6$

$\{0.436, -3.436\}$

17) $4r^2 = 8$

$\{1.414, -1.414\}$

18) $6b^2 - 2b = 3$

$\{0.893, -0.56\}$

19) $x^2 - 49 = 0$

$\{7, -7\}$

20) $6a^2 - 1 = -5a$

$\{0.167, -1\}$

21) $10n^2 = 3n + 2$

$\{0.622, -0.322\}$

22) $x^2 - 25 = 0$

$\{5, -5\}$

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $3n^2 = 10$

2) $4b^2 - 5b = 6$

3) $n^2 = -10n - 24$

4) $6n^2 - n = 57$

5) $a^2 - 8a = 9$

6) $3m^2 - 35 = 8m$

7) $2x^2 + 12x = 15$

8) $2n^2 - 6 = 0$

9) $2r^2 = 5r + 7$

10) $5m^2 + 2 = 11m$

11) $12m^2 - 12 = -11m$

12) $3x^2 + 9x = -4$

13) $7x^2 - 5x = -10$

14) $n^2 + 28 = 11n$

15) $8a^2 + 8a = 23$

16) $n^2 = 1$

17) $4n^2 + 10n = -4$

18) $5n^2 - 7n = -8$

19) $x^2 = 100$

20) $8k^2 - 21 = 0$

21) $6k^2 - 4k = 130$

22) $3n^2 + 8n = 60$

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $3n^2 = 10$

 $\{1.826, -1.826\}$

2) $4b^2 - 5b = 6$

 $\{2, -0.75\}$

3) $n^2 = -10n - 24$

 $\{-4, -6\}$

4) $6n^2 - n = 57$

 $\{3.167, -3\}$

5) $a^2 - 8a = 9$

 $\{9, -1\}$

6) $3m^2 - 35 = 8m$

 $\{5, -2.333\}$

7) $2x^2 + 12x = 15$

 $\{1.062, -7.062\}$

8) $2n^2 - 6 = 0$

 $\{1.732, -1.732\}$

9) $2r^2 = 5r + 7$

 $\{3.5, -1\}$

10) $5m^2 + 2 = 11m$

 $\{2, 0.2\}$

11) $12m^2 - 12 = -11m$

 $\{0.642, -1.558\}$

12) $3x^2 + 9x = -4$

 $\{-0.543, -2.457\}$

13) $7x^2 - 5x = -10$

No solution.

14) $n^2 + 28 = 11n$

 $\{7, 4\}$

15) $8a^2 + 8a = 23$

 $\{1.268, -2.268\}$

16) $n^2 = 1$

 $\{1, -1\}$

17) $4n^2 + 10n = -4$

 $\{-0.5, -2\}$

18) $5n^2 - 7n = -8$

No solution.

19) $x^2 = 100$

 $\{10, -10\}$

20) $8k^2 - 21 = 0$

 $\{1.62, -1.62\}$

21) $6k^2 - 4k = 130$

 $\{5, -4.333\}$

22) $3n^2 + 8n = 60$

 $\{3.333, -6\}$

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $4p^2 = 8p - 6$

2) $11p^2 = 15 + 6p$

3) $7r^2 - 17 = 4r$

4) $7p^2 = 17$

5) $12x^2 = -1 + 6x$

6) $m^2 - 4m = 12$

7) $6x^2 - 12 = -7x$

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

9) $2v^2 - 54 = -12v$

10) $2x^2 - 21 = -11x$

11) $6v^2 - 8 = 6v$

12) $4b^2 = 4$

13) $3b^2 = 22$

14) $11x^2 - 11x = 6$

15) $6n^2 + 12n = 19$

16) $2x^2 - 11 = 0$

17) $7v^2 - 6 = -2v$

18) $b^2 = 81$

19) $5n^2 - 5n = 10$

20) $3m^2 - 1 = 6m$

21) $4m^2 - 9 = 9m$

22) $10n^2 - 22 = -3n$

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $4p^2 = 8p - 6$

No solution.

2) $11p^2 = 15 + 6p$

 $\{1.472, -0.926\}$

3) $7r^2 - 17 = 4r$

 $\{1.87, -1.299\}$

4) $7p^2 = 17$

 $\{1.558, -1.558\}$

5) $12x^2 = -1 + 6x$

No solution.

6) $m^2 - 4m = 12$

 $\{6, -2\}$

7) $6x^2 - 12 = -7x$

 $\{0.946, -2.113\}$

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

 $\{-2\}$

9) $2v^2 - 54 = -12v$

 $\{3, -9\}$

10) $2x^2 - 21 = -11x$

 $\{1.5, -7\}$

11) $6v^2 - 8 = 6v$

 $\{1.758, -0.758\}$

12) $4b^2 = 4$

 $\{1, -1\}$

13) $3b^2 = 22$

 $\{2.708, -2.708\}$

14) $11x^2 - 11x = 6$

 $\{1.392, -0.392\}$

15) $6n^2 + 12n = 19$

 $\{1.041, -3.041\}$

16) $2x^2 - 11 = 0$

 $\{2.345, -2.345\}$

17) $7v^2 - 6 = -2v$

 $\{0.794, -1.08\}$

18) $b^2 = 81$

 $\{9, -9\}$

19) $5n^2 - 5n = 10$

 $\{2, -1\}$

20) $3m^2 - 1 = 6m$

 $\{2.155, -0.155\}$

21) $4m^2 - 9 = 9m$

 $\{3, -0.75\}$

22) $10n^2 - 22 = -3n$

 $\{1.341, -1.641\}$

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $5n^2 = -10 - 12n$

2) $b^2 - 5b = 8$

3) $6k^2 - 3 = 8k$

4) $10r^2 = 20$

5) $11r^2 + 12r = 8$

6) $12x^2 + 7x = 15$

7) $4n^2 = 14$

8) $x^2 - 7x = 78$

9) $5a^2 - 19 = -11a$

10) $2p^2 - 50 = 0$

11) $2k^2 + 1 = 0$

12) $2x^2 + 6x = 3$

13) $6x^2 - 16 = -12x$

14) $4m^2 + 4m = 8$

15) $2n^2 = 11 - 9n$

16) $4n^2 + 3 = 0$

17) $5x^2 - 7x = 6$

18) $8r^2 = 9r + 4$

19) $11x^2 + 10x = 23$

20) $6m^2 - 11 = 0$

21) $6x^2 - 100 = -x$

22) $k^2 = 16 - 4k$

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $5n^2 = -10 - 12n$

No solution.

2) $b^2 - 5b = 8$

 $\{6.275, -1.275\}$

3) $6k^2 - 3 = 8k$

 $\{1.638, -0.305\}$

4) $10r^2 = 20$

 $\{1.414, -1.414\}$

5) $11r^2 + 12r = 8$

 $\{0.467, -1.558\}$

6) $12x^2 + 7x = 15$

 $\{0.864, -1.447\}$

7) $4n^2 = 14$

 $\{1.871, -1.871\}$

8) $x^2 - 7x = 78$

 $\{13, -6\}$

9) $5a^2 - 19 = -11a$

 $\{1.138, -3.338\}$

10) $2p^2 - 50 = 0$

 $\{5, -5\}$

11) $2k^2 + 1 = 0$

No solution.

12) $2x^2 + 6x = 3$

 $\{0.436, -3.436\}$

13) $6x^2 - 16 = -12x$

 $\{0.915, -2.915\}$

14) $4m^2 + 4m = 8$

 $\{1, -2\}$

15) $2n^2 = 11 - 9n$

 $\{1, -5.5\}$

16) $4n^2 + 3 = 0$

No solution.

17) $5x^2 - 7x = 6$

 $\{2, -0.6\}$

18) $8r^2 = 9r + 4$

 $\{1.466, -0.341\}$

19) $11x^2 + 10x = 23$

 $\{1.061, -1.97\}$

20) $6m^2 - 11 = 0$

 $\{1.354, -1.354\}$

21) $6x^2 - 100 = -x$

 $\{4, -4.167\}$

22) $k^2 = 16 - 4k$

 $\{2.472, -6.472\}$

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $6v^2 - 96 = 0$

2) $6p^2 = 30 + 3p$

3) $n^2 = 36$

4) $11p^2 - 15 = -3p$

5) $3p^2 = 27$

6) $5k^2 - 2k = 39$

7) $6b^2 - 36 = -6b$

8) $5r^2 + 6 = 11r$

9) $4x^2 - 10x = 15$

10) $3m^2 = -12m + 21$

11) $7x^2 - 16 = -8x$

12) $4v^2 = -9 - 11v$

13) $8v^2 - 11v = 11$

14) $4m^2 - 4 = 0$

15) $5m^2 - 80 = 0$

16) $3n^2 + 4n = 95$

17) $5p^2 + 1 = 9p$

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

19) $x^2 = 4$

20) $6x^2 - 112 = -4x$

21) $x^2 + 5 = 0$

22) $4p^2 = 1$

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $6v^2 - 96 = 0$

 $\{4, -4\}$

2) $6p^2 = 30 + 3p$

 $\{2.5, -2\}$

3) $n^2 = 36$

 $\{6, -6\}$

4) $11p^2 - 15 = -3p$

 $\{1.039, -1.312\}$

5) $3p^2 = 27$

 $\{3, -3\}$

6) $5k^2 - 2k = 39$

 $\{3, -2.6\}$

7) $6b^2 - 36 = -6b$

 $\{2, -3\}$

8) $5r^2 + 6 = 11r$

 $\{1.2, 1\}$

9) $4x^2 - 10x = 15$

 $\{3.555, -1.055\}$

10) $3m^2 = -12m + 21$

 $\{1.317, -5.317\}$

11) $7x^2 - 16 = -8x$

 $\{1.045, -2.188\}$

12) $4v^2 = -9 - 11v$

No solution.

13) $8v^2 - 11v = 11$

 $\{2.047, -0.672\}$

14) $4m^2 - 4 = 0$

 $\{1, -1\}$

15) $5m^2 - 80 = 0$

 $\{4, -4\}$

16) $3n^2 + 4n = 95$

 $\{5, -6.333\}$

17) $5p^2 + 1 = 9p$

 $\{1.681, 0.119\}$

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

 $\{0.91, -1.465\}$

19) $x^2 = 4$

 $\{2, -2\}$

20) $6x^2 - 112 = -4x$

 $\{4, -4.667\}$

21) $x^2 + 5 = 0$

No solution.

22) $4p^2 = 1$

 $\{0.5, -0.5\}$

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $6b^2 + 9b = 20$

2) $4v^2 + 8v = -4$

3) $8k^2 = -9 + 3k$

4) $10n^2 - 11 = -11n$

5) $3p^2 - 11 = 8p$

6) $11v^2 - 8 = 5v$

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

8) $4x^2 - 34 = 9x$

9) $k^2 = k + 7$

10) $2v^2 = 9v + 143$

11) $3b^2 - 18 = -6b$

12) $n^2 = 15 + 3n$

13) $10x^2 = 24$

14) $r^2 + 8 = -10r$

15) $4a^2 + 3a = 45$

16) $2v^2 - 9 = -7v$

17) $9x^2 = 17 + 10x$

18) $2r^2 - 32 = 12r$

19) $3n^2 - 144 = -11n$

20) $4p^2 = 6p + 21$

21) $x^2 - 66 = -5x$

22) $4b^2 = -6 + 9b$

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $6b^2 + 9b = 20$

 $\{1.224, -2.724\}$

2) $4v^2 + 8v = -4$

 $\{-1\}$

3) $8k^2 = -9 + 3k$

No solution.

4) $10n^2 - 11 = -11n$

 $\{0.634, -1.734\}$

5) $3p^2 - 11 = 8p$

 $\{3.667, -1\}$

6) $11v^2 - 8 = 5v$

 $\{1.11, -0.655\}$

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

No solution.

8) $4x^2 - 34 = 9x$

 $\{4.25, -2\}$

9) $k^2 = k + 7$

 $\{3.193, -2.193\}$

10) $2v^2 = 9v + 143$

 $\{11, -6.5\}$

11) $3b^2 - 18 = -6b$

 $\{1.646, -3.646\}$

12) $n^2 = 15 + 3n$

 $\{5.653, -2.653\}$

13) $10x^2 = 24$

 $\{1.549, -1.549\}$

14) $r^2 + 8 = -10r$

 $\{-0.877, -9.123\}$

15) $4a^2 + 3a = 45$

 $\{3, -3.75\}$

16) $2v^2 - 9 = -7v$

 $\{1, -4.5\}$

17) $9x^2 = 17 + 10x$

 $\{2.038, -0.927\}$

18) $2r^2 - 32 = 12r$

 $\{8, -2\}$

19) $3n^2 - 144 = -11n$

 $\{5.333, -9\}$

20) $4p^2 = 6p + 21$

 $\{3.161, -1.661\}$

21) $x^2 - 66 = -5x$

 $\{6, -11\}$

22) $4b^2 = -6 + 9b$

No solution.

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $4a^2 = -8a + 22$

2) $10p^2 - 4p = 15$

3) $3v^2 = 27$

4) $5x^2 = 8x + 112$

5) $9n^2 = 17$

6) $2v^2 = 24$

7) $r^2 = 15$

8) $9x^2 = 12 + 8x$

9) $2x^2 - 8 = 0$

10) $8r^2 - 6 = -7r$

11) $2p^2 - 18 = 0$

12) $11x^2 - 20 = 7x$

13) $4n^2 = 34 + 9n$

14) $6x^2 = -x + 57$

15) $6b^2 + 11 = 0$

16) $4n^2 = 13 - 2n$

17) $6n^2 + n = 126$

18) $2k^2 - 5k = 18$

19) $9m^2 = -5$

20) $6n^2 - n = 4$

21) $6n^2 = 140 - 2n$

22) $11v^2 = 8v - 3$

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $4a^2 = -8a + 22$

 $\{1.55, -3.55\}$

2) $10p^2 - 4p = 15$

 $\{1.441, -1.041\}$

3) $3v^2 = 27$

 $\{3, -3\}$

4) $5x^2 = 8x + 112$

 $\{5.6, -4\}$

5) $9n^2 = 17$

 $\{1.374, -1.374\}$

6) $2v^2 = 24$

 $\{3.464, -3.464\}$

7) $r^2 = 15$

 $\{3.873, -3.873\}$

8) $9x^2 = 12 + 8x$

 $\{1.682, -0.793\}$

9) $2x^2 - 8 = 0$

 $\{2, -2\}$

10) $8r^2 - 6 = -7r$

 $\{0.533, -1.408\}$

11) $2p^2 - 18 = 0$

 $\{3, -3\}$

12) $11x^2 - 20 = 7x$

 $\{1.704, -1.067\}$

13) $4n^2 = 34 + 9n$

 $\{4.25, -2\}$

14) $6x^2 = -x + 57$

 $\{3, -3.167\}$

15) $6b^2 + 11 = 0$

No solution.

16) $4n^2 = 13 - 2n$

 $\{1.57, -2.07\}$

17) $6n^2 + n = 126$

 $\{4.5, -4.667\}$

18) $2k^2 - 5k = 18$

 $\{4.5, -2\}$

19) $9m^2 = -5$

No solution.

20) $6n^2 - n = 4$

 $\{0.904, -0.737\}$

21) $6n^2 = 140 - 2n$

 $\{4.667, -5\}$

22) $11v^2 = 8v - 3$

No solution.

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $10n^2 - 9 = 7n$

2) $2r^2 = -4r + 70$

3) $3x^2 - 30 = x$

4) $10p^2 - 12 = 0$

5) $12r^2 = 9$

6) $2n^2 = -2n + 15$

7) $5b^2 - 5 = 0$

8) $3n^2 = -7n + 6$

9) $6x^2 = -8 + 8x$

10) $x^2 = -5x - 6$

11) $4n^2 = -11n + 119$

12) $4x^2 = 100$

13) $4p^2 + 12p = 91$

14) $3x^2 = 8 + x$

15) $7n^2 + 11 = 9n$

16) $3r^2 - 13 = -5r$

17) $12b^2 = -1 + 11b$

18) $3k^2 - k = 4$

19) $6x^2 - 3 = -3x$

20) $2x^2 = -18 + 12x$

21) $2x^2 - 9 = 3x$

22) $p^2 + 6p = 12$

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $10n^2 - 9 = 7n$

 $\{1.361, -0.661\}$

2) $2r^2 = -4r + 70$

 $\{5, -7\}$

3) $3x^2 - 30 = x$

 $\{3.333, -3\}$

4) $10p^2 - 12 = 0$

 $\{1.095, -1.095\}$

5) $12r^2 = 9$

 $\{0.866, -0.866\}$

6) $2n^2 = -2n + 15$

 $\{2.284, -3.284\}$

7) $5b^2 - 5 = 0$

 $\{1, -1\}$

8) $3n^2 = -7n + 6$

 $\{0.667, -3\}$

9) $6x^2 = -8 + 8x$

No solution.

10) $x^2 = -5x - 6$

 $\{-2, -3\}$

11) $4n^2 = -11n + 119$

 $\{4.25, -7\}$

12) $4x^2 = 100$

 $\{5, -5\}$

13) $4p^2 + 12p = 91$

 $\{3.5, -6.5\}$

14) $3x^2 = 8 + x$

 $\{1.808, -1.475\}$

15) $7n^2 + 11 = 9n$

No solution.

16) $3r^2 - 13 = -5r$

 $\{1.409, -3.076\}$

17) $12b^2 = -1 + 11b$

 $\{0.814, 0.102\}$

18) $3k^2 - k = 4$

 $\{1.333, -1\}$

19) $6x^2 - 3 = -3x$

 $\{0.5, -1\}$

20) $2x^2 = -18 + 12x$

 $\{3\}$

21) $2x^2 - 9 = 3x$

 $\{3, -1.5\}$

22) $p^2 + 6p = 12$

 $\{1.583, -7.583\}$

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $2x^2 = 84 - 2x$

2) $8n^2 - 11n = 5$

3) $b^2 - 8 = 7b$

4) $3v^2 + 7v = -12$

5) $6r^2 - 4r = 112$

6) $5k^2 = 80$

7) $6x^2 - 5 = -5x$

8) $x^2 = 5 - 4x$

9) $4x^2 + 12 = -6x$

10) $b^2 - 21 = -4b$

11) $5n^2 = 3n + 3$

12) $2x^2 - 2x = 15$

13) $6x^2 - 3 = 0$

14) $2v^2 = 18$

15) $2x^2 + 7x = 60$

16) $6r^2 = -2 + r$

17) $8x^2 - 12 = -5x$

18) $9p^2 - 12 = -4p$

19) $a^2 - 2 = 8a$

20) $5n^2 - 51 = -2n$

21) $n^2 = 39 - 10n$

22) $3v^2 - 8v = -3$

Assignment

Date _____ Period _____

Solve each equation with the quadratic formula.

1) $2x^2 = 84 - 2x$

 $\{6, -7\}$

2) $8n^2 - 11n = 5$

 $\{1.735, -0.36\}$

3) $b^2 - 8 = 7b$

 $\{8, -1\}$

4) $3v^2 + 7v = -12$

No solution.

5) $6r^2 - 4r = 112$

 $\{4.667, -4\}$

6) $5k^2 = 80$

 $\{4, -4\}$

7) $6x^2 - 5 = -5x$

 $\{0.587, -1.42\}$

8) $x^2 = 5 - 4x$

 $\{1, -5\}$

9) $4x^2 + 12 = -6x$

No solution.

10) $b^2 - 21 = -4b$

 $\{3, -7\}$

11) $5n^2 = 3n + 3$

 $\{1.131, -0.531\}$

12) $2x^2 - 2x = 15$

 $\{3.284, -2.284\}$

13) $6x^2 - 3 = 0$

 $\{0.707, -0.707\}$

14) $2v^2 = 18$

 $\{3, -3\}$

15) $2x^2 + 7x = 60$

 $\{4, -7.5\}$

16) $6r^2 = -2 + r$

No solution.

17) $8x^2 - 12 = -5x$

 $\{0.951, -1.576\}$

18) $9p^2 - 12 = -4p$

 $\{0.954, -1.398\}$

19) $a^2 - 2 = 8a$

 $\{8.243, -0.243\}$

20) $5n^2 - 51 = -2n$

 $\{3, -3.4\}$

21) $n^2 = 39 - 10n$

 $\{3, -13\}$

22) $3v^2 - 8v = -3$

 $\{2.215, 0.451\}$

Assignment

Solve each equation with the quadratic formula.

1) $2x^2 = 140 + 6x$

2) $5x^2 - 23 = 8x$

3) $2p^2 - 18 = 6p$

4) $2x^2 = -12x + 32$

5) $4p^2 - 9 = 0$

6) $10b^2 + 10b = 13$

7) $9x^2 - 24 = -11x$

8) $6n^2 = -5n + 11$

9) $6a^2 - 10 = 11a$

10) $3a^2 - 10a = 23$

11) $k^2 - 98 = 7k$

12) $11p^2 + 7 = -4p$

13) $8n^2 = 7n + 13$

14) $3p^2 + 4p = 132$

15) $2n^2 = 10n + 48$

16) $2b^2 + 7b = 114$

17) $6b^2 - 13 = -10b$

18) $3m^2 - 2 = -9m$

19) $6n^2 + 3 = n$

20) $2m^2 = 22$

21) $x^2 - 60 = -7x$

22) $4n^2 - 7n = 30$

Assignment

Solve each equation with the quadratic formula.

1) $2x^2 = 140 + 6x$

 $\{10, -7\}$

2) $5x^2 - 23 = 8x$

 $\{3.089, -1.489\}$

3) $2p^2 - 18 = 6p$

 $\{4.854, -1.854\}$

4) $2x^2 = -12x + 32$

 $\{2, -8\}$

5) $4p^2 - 9 = 0$

 $\{1.5, -1.5\}$

6) $10b^2 + 10b = 13$

 $\{0.745, -1.745\}$

7) $9x^2 - 24 = -11x$

 $\{1.132, -2.355\}$

8) $6n^2 = -5n + 11$

 $\{1, -1.833\}$

9) $6a^2 - 10 = 11a$

 $\{2.5, -0.667\}$

10) $3a^2 - 10a = 23$

 $\{4.898, -1.565\}$

11) $k^2 - 98 = 7k$

 $\{14, -7\}$

12) $11p^2 + 7 = -4p$

No solution.

13) $8n^2 = 7n + 13$

 $\{1.785, -0.91\}$

14) $3p^2 + 4p = 132$

 $\{6, -7.333\}$

15) $2n^2 = 10n + 48$

 $\{8, -3\}$

16) $2b^2 + 7b = 114$

 $\{6, -9.5\}$

17) $6b^2 - 13 = -10b$

 $\{0.858, -2.525\}$

18) $3m^2 - 2 = -9m$

 $\{0.208, -3.208\}$

19) $6n^2 + 3 = n$

No solution.

20) $2m^2 = 22$

 $\{3.317, -3.317\}$

21) $x^2 - 60 = -7x$

 $\{5, -12\}$

22) $4n^2 - 7n = 30$

 $\{3.75, -2\}$