Solving Quadratic Equations Name:

Solve each problem. Write your answer as a decimal rounded to 2 places.

1) $9x^2 + 3x - 6$

2) $x(-15x - 14) = 3$

3) $x(4x + 20) = -25$

4) $16x^2 = -(0x - 16)$

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

6) $4x^2 = -(13x - 12)$

7) $-6x^2 + 1x + 1$

8) $10x^2 = -(-1x - 2)$

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

10) $x(5x + 15) = -10$

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

1-10	90	80	70	60	50	40	30	20	10	0

Solving Quadratic Equations Name: **Answer Key**

Solve each problem. Write your answer as a decimal rounded to 2 places.

1) $9x^2 + 3x - 6$

$-3 \pm \sqrt{32 - 4(9)(-6)}$

$\frac{-3 \pm 15}{18}$

$x_+ = \frac{2}{3}$

$x_- = \frac{-1}{1}$

2) $x(-15x - 14) = 3$

$14 \pm \sqrt{-142 - 4(-15)(-3)}$

$\frac{14 \pm 4}{-30}$

$x_+ = \frac{3}{-5}$

$x_- = \frac{1}{-3}$

3) $x(4x + 20) = -25$

$-20 \pm \sqrt{202 - 4(4)(25)}$

$\frac{-20 \pm 0}{8}$

$x_+ = \frac{-5}{2}$

$x_- = \frac{-5}{2}$

4) $16x^2 = -(0x - 16)$

$-0 \pm \sqrt{2 - 4(16)(-16)}$

$\frac{0 \pm 32}{32}$

$x_+ = \frac{1}{1}$

$x_- = \frac{-1}{1}$

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

$7 \pm \sqrt{-72 - 4(6)(2)}$

$\frac{7 \pm 1}{12}$

$x_+ = \frac{2}{3}$

$x_- = \frac{1}{2}$

6) $4x^2 = -(13x - 12)$

$-13 \pm \sqrt{132 - 4(4)(-12)}$

$\frac{-13 \pm 19}{8}$

$x_+ = \frac{3}{4}$

$x_- = \frac{-4}{1}$

7) $-6x^2 + 1x + 1$

$-1 \pm \sqrt{12 - 4(-6)(1)}$

$\frac{-1 \pm 5}{-12}$

$x_+ = \frac{1}{-3}$

$x_- = \frac{-1}{-2}$

8) $10x^2 = -(-1x - 2)$

$1 \pm \sqrt{-12 - 4(10)(-2)}$

$\frac{1 \pm 9}{20}$

$x_+ = \frac{1}{2}$

$x_- = \frac{-2}{5}$

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

$-6 \pm \sqrt{62 - 4(4)(-4)}$

$\frac{-6 \pm 10}{8}$

$x_+ = \frac{1}{2}$

$x_- = \frac{-2}{1}$

10) $x(5x + 15) = -10$

$-15 \pm \sqrt{152 - 4(5)(10)}$

$\frac{-15 \pm 5}{10}$

$x_+ = \frac{-1}{1}$

$x_- = \frac{-2}{1}$

Answers

1. **0.67 , -1.00**
2. **-0.60 , -0.33**
3. **-2.50 , -2.50**
4. **1.00 , -1.00**
5. **0.67 , 0.50**
6. **0.75 , -4.00**
7. **-0.33 , 0.50**
8. **0.50 , -0.40**
9. **0.50 , -2.00**
10. **-1.00 , -2.00**

1-10	90	80	70	60	50	40	30	20	10	0