Solving Quadratic Equations Name:

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

1) x(1x + 3) = 4

2) x(-3x + 10) = -25

3) x(5x - 30) = -25

4) x(-5x - 29) = 20

5) x(15x + 17) = 4

6) x(8x - 4) = 12

7) x(12x + 2) = 4

8) x(-4x - 8) = 4

9) x(16x - 36) = -20

10) x(4x + 8) = 5

Answers

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

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

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

1) x(1x + 3) = 4

$-3 \pm \sqrt{32 - 4(1)(-4)}$

$\frac{-3 \pm 5}{2}$

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

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

2) x(-3x + 10) = -25

$-10 \pm \sqrt{102 - 4(-3)(25)}$

$\frac{-10 \pm 20}{-6}$

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

$x_- = \frac{-5}{-1}$

3) x(5x - 30) = -25

$30 \pm \sqrt{-302 - 4(5)(25)}$

$\frac{30 \pm 20}{10}$

$x_+ = \frac{5}{1}$

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

4) x(-5x - 29) = 20

$29 \pm \sqrt{-292 - 4(-5)(-20)}$

$\frac{29 \pm 21}{-10}$

$x_+ = \frac{5}{-1}$

$x_- = \frac{4}{-5}$

5) x(15x + 17) = 4

$-17 \pm \sqrt{172 - 4(15)(-4)}$

$\frac{-17 \pm 23}{30}$

$x_+ = \frac{1}{5}$

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

6) x(8x - 4) = 12

$4 \pm \sqrt{-42 - 4(8)(-12)}$

$\frac{4 \pm 20}{16}$

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

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

7) x(12x + 2) = 4

$-2 \pm \sqrt{22 - 4(12)(-4)}$

$\frac{-2 \pm 14}{24}$

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

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

8) x(-4x - 8) = 4

$8 \pm \sqrt{-82 - 4(-4)(-4)}$

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

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

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

9) x(16x - 36) = -20

$36 \pm \sqrt{-362 - 4(16)(20)}$

$\frac{36 \pm 4}{32}$

$x_+ = \frac{5}{4}$

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

10) x(4x + 8) = 5

$-8 \pm \sqrt{82 - 4(4)(-5)}$

$\frac{-8 \pm 12}{8}$

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

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

Answers

1. **1.00 , -4.00**
2. **-1.67 , 5.00**
3. **5.00 , 1.00**
4. **-5.00 , -0.80**
5. **0.20 , -1.33**
6. **1.50 , -1.00**
7. **0.50 , -0.67**
8. **-1.00 , -1.00**
9. **1.25 , 1.00**
10. **0.50 , -2.50**

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