Solving Quadratic Equations

Name:

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

1) $10x^2 + 9x - 9$

2) $8x^2 = -(14x + 6)$

3) $-1x^2 = -(3x - 2)$

4) $-16x^2 = -(24x - 8)$

5) $x(20x - 21) = -4$

6) $15x^2 - 27x + 12$

7) $x(8x + 24) = -10$

8) $-6x^2 = -(11x - 3)$

9) $x(-20x - 11) = -3$

10) $-6x^2 + 7x + 5$

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) $10x^2 + 9x - 9$

$\frac{-9+-\sqrt{92 - 4(10)(-9)}}{-9 \pm 21}$

$\frac{20}{x_+ = \frac{3}{5}}$

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

2) $8x^2 = -(14x + 6)$

$\frac{-14+-\sqrt{142 - 4(8)(6)}}{-14 \pm 2}$

$\frac{16}{x_+ = \frac{-3}{4}}$

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

3) $-1x^2 = -(3x - 2)$

$\frac{-3+-\sqrt{32 - 4(-1)(-2)}}{-3 \pm 1}$

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

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

4) $-16x^2 = -(24x - 8)$

$\frac{-24+-\sqrt{242 - 4(-16)(-8)}}{-24 \pm 8}$

$\frac{-32}{x_+ = \frac{-1}{-2}}$

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

5) $x(20x - 21) = -4$

$\frac{21+-\sqrt{-212 - 4(20)(4)}}{21 \pm 11}$

$\frac{40}{x_+ = \frac{4}{5}}$

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

6) $15x^2 - 27x + 12$

$\frac{27+-\sqrt{-272 - 4(15)(12)}}{27 \pm 3}$

$\frac{30}{x_+ = \frac{1}{1}}$

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

7) $x(8x + 24) = -10$

$\frac{-24+-\sqrt{242 - 4(8)(10)}}{-24 \pm 16}$

$\frac{16}{x_+ = \frac{-1}{2}}$

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

8) $-6x^2 = -(11x - 3)$

$\frac{-11+-\sqrt{112 - 4(-6)(-3)}}{-11 \pm 7}$

$\frac{-12}{x_+ = \frac{-1}{-3}}$

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

9) $x(-20x - 11) = -3$

$\frac{11+-\sqrt{-112 - 4(-20)(3)}}{11 \pm 19}$

$\frac{-40}{x_+ = \frac{3}{-4}}$

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

10) $-6x^2 + 7x + 5$

$\frac{-7+-\sqrt{72 - 4(-6)(5)}}{-7 \pm 13}$

$\frac{-12}{x_+ = \frac{1}{-2}}$

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

Answers

1. **0.60 , -1.50**
2. **-0.75 , -1.00**
3. **1.00 , 2.00**
4. **0.50 , 1.00**
5. **0.80 , 0.25**
6. **1.00 , 0.80**
7. **-0.50 , -2.50**
8. **0.33 , 1.50**
9. **-0.75 , 0.20**
10. **-0.50 , 1.67**

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