



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

Answers

1) $x(1x + 3) = 4$

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

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

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) $x(4x + 8) = 5$



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

1) $x(1x + 3) = 4$

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

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

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

$$x_- = -\frac{4}{2}$$

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

$$\frac{-10 \pm \sqrt{102 - 4(-3)(-25)}}{-6}$$

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

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

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

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

$$\frac{30 \pm \sqrt{-302 - 4(5)(-25)}}{10}$$

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

$$x_+ = \frac{5}{10}$$

$$x_- = \frac{1}{10}$$

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

$$\frac{29 \pm \sqrt{-292 - 4(-5)(-20)}}{-10}$$

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

$$x_+ = \frac{5}{-10}$$

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

5) $x(15x + 17) = 4$

$$\frac{-17 \pm \sqrt{172 - 4(15)(-4)}}{30}$$

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

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

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

6) $x(8x - 4) = 12$

$$\frac{4 \pm \sqrt{-42 - 4(8)(-12)}}{16}$$

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

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

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

7) $x(12x + 2) = 4$

$$\frac{-2 \pm \sqrt{22 - 4(12)(-4)}}{24}$$

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

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

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

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

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

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

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

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

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

$$\frac{36 \pm \sqrt{-362 - 4(16)(-20)}}{32}$$

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

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

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

10) $x(4x + 8) = 5$

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

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

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

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

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**



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

Answers

1) $x(-8x + 6) = -9$

2) $x(2x + 1) = 1$

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

3) $x(5x - 23) = -12$

4) $x(12x + 13) = -3$

5) $x(-12x + 1) = -1$

6) $x(2x + 9) = -9$

7) $x(20x + 17) = -3$

8) $x(15x + 17) = 4$

9) $x(1x + 2) = 8$

10) $x(16x - 20) = -6$



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

1) $x(-8x + 6) = -9$

$$\frac{-6 \pm \sqrt{62 - 4(-8)(9)}}{-16}$$

$$\frac{-6 \pm 18}{-16}$$

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

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

2) $x(2x + 1) = 1$

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

$$\frac{-1 \pm 3}{4}$$

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

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

3) $x(5x - 23) = -12$

$$\frac{23 \pm \sqrt{-232 - 4(5)(12)}}{10}$$

$$\frac{23 \pm 17}{10}$$

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

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

4) $x(12x + 13) = -3$

$$\frac{-13 \pm \sqrt{132 - 4(12)(3)}}{24}$$

$$\frac{-13 \pm 5}{24}$$

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

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

5) $x(-12x + 1) = -1$

$$\frac{-1 \pm \sqrt{12 - 4(-12)(1)}}{-24}$$

$$\frac{-1 \pm 7}{-24}$$

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

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

6) $x(2x + 9) = -9$

$$\frac{-9 \pm \sqrt{92 - 4(2)(9)}}{4}$$

$$\frac{-9 \pm 3}{4}$$

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

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

7) $x(20x + 17) = -3$

$$\frac{-17 \pm \sqrt{172 - 4(20)(3)}}{40}$$

$$\frac{-17 \pm 7}{40}$$

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

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

8) $x(15x + 17) = 4$

$$\frac{-17 \pm \sqrt{172 - 4(15)(-4)}}{30}$$

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

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

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

9) $x(1x + 2) = 8$

$$\frac{-2 \pm \sqrt{22 - 4(1)(-8)}}{2}$$

$$\frac{-2 \pm 6}{2}$$

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

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

10) $x(16x - 20) = -6$

$$\frac{20 \pm \sqrt{-202 - 4(16)(6)}}{32}$$

$$\frac{20 \pm 4}{32}$$

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

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

Answers

1. **-0.75 , 1.50**

2. **0.50 , -1.00**

3. **4.00 , 0.60**

4. **-0.33 , -0.75**

5. **-0.25 , 0.33**

6. **-1.50 , -3.00**

7. **-0.25 , -0.60**

8. **0.20 , -1.33**

9. **2.00 , -4.00**

10. **0.75 , 0.50**



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

Answers

1) $x(10x - 14) = 12$

2) $x(-15x - 27) = 12$

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

3) $x(-8x + 10) = -3$

4) $x(10x + 0) = 10$

5) $x(-15x - 22) = -5$

6) $x(4x + 4) = 15$

7) $x(-4x - 13) = 3$

8) $x(8x + 12) = 20$

9) $x(-9x - 3) = -12$

10) $x(-25x + 25) = 4$



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

1) $x(10x - 14) = 12$

$$\frac{14 \pm \sqrt{-142 - 4(10)(-12)}}{20}$$

$$\frac{14 \pm 26}{20}$$

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

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

2) $x(-15x - 27) = 12$

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

$$\frac{-30}{-30}$$

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

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

3) $x(-8x + 10) = -3$

$$\frac{-10 \pm \sqrt{102 - 4(-8)(3)}}{-16}$$

$$\frac{-10 \pm 14}{-16}$$

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

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

4) $x(10x + 0) = 10$

$$\frac{-0 \pm \sqrt{2 - 4(10)(-10)}}{20}$$

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

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

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

5) $x(-15x - 22) = -5$

$$\frac{22 \pm \sqrt{-222 - 4(-15)(5)}}{22 \pm 28}$$

$$\frac{-30}{-30}$$

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

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

6) $x(4x + 4) = 15$

$$\frac{-4 \pm \sqrt{42 - 4(4)(-15)}}{-4 \pm 16}$$

$$\frac{8}{8}$$

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

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

7) $x(-4x - 13) = 3$

$$\frac{13 \pm \sqrt{-132 - 4(-4)(-3)}}{13 \pm 11}$$

$$\frac{-8}{-8}$$

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

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

8) $x(8x + 12) = 20$

$$\frac{-12 \pm \sqrt{122 - 4(8)(-20)}}{-12 \pm 28}$$

$$\frac{16}{16}$$

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

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

9) $x(-9x - 3) = -12$

$$\frac{3 \pm \sqrt{-32 - 4(-9)(12)}}{3 \pm 21}$$

$$\frac{-18}{-18}$$

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

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

10) $x(-25x + 25) = 4$

$$\frac{-25 \pm \sqrt{252 - 4(-25)(-4)}}{-25 \pm 15}$$

$$\frac{-50}{-50}$$

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

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

Answers

1. **2.00 , -0.60**

2. **-1.00 , -0.80**

3. **-0.25 , 1.50**

4. **1.00 , -1.00**

5. **-1.67 , 0.20**

6. **1.50 , -2.50**

7. **-3.00 , -0.25**

8. **1.00 , -2.50**

9. **-1.33 , 1.00**

10. **0.20 , 0.80**



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

Answers

1) $x(-3x - 6) = 3$

2) $x(1x + 1) = 20$

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

3) $x(-8x - 4) = -4$

4) $x(15x + 12) = 3$

5) $x(4x - 17) = -15$

6) $x(-8x - 16) = 6$

7) $x(-3x + 9) = -12$

8) $x(-8x + 8) = -6$

9) $x(12x + 2) = 2$

10) $x(-12x - 20) = 8$



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

1) $x(-3x - 6) = 3$

$$\frac{6 \pm \sqrt{-62 - 4(-3)(-3)}}{2(-3)}$$

$$\frac{6 \pm 0}{-6}$$

$$x_+ = -1$$

$$x_- = -1$$

2) $x(1x + 1) = 20$

$$\frac{-1 \pm \sqrt{12 - 4(1)(-20)}}{2(1)}$$

$$\frac{-1 \pm 9}{2}$$

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

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

3) $x(-8x - 4) = -4$

$$\frac{4 \pm \sqrt{-42 - 4(-8)(4)}}{2(-8)}$$

$$\frac{4 \pm 12}{-16}$$

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

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

4) $x(15x + 12) = 3$

$$\frac{-12 \pm \sqrt{122 - 4(15)(-3)}}{2(15)}$$

$$\frac{-12 \pm 18}{30}$$

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

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

5) $x(4x - 17) = -15$

$$\frac{17 \pm \sqrt{-172 - 4(4)(15)}}{2(4)}$$

$$\frac{17 \pm 7}{8}$$

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

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

6) $x(-8x - 16) = 6$

$$\frac{16 \pm \sqrt{-162 - 4(-8)(-6)}}{2(-8)}$$

$$\frac{16 \pm 8}{-16}$$

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

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

7) $x(-3x + 9) = -12$

$$\frac{-9 \pm \sqrt{92 - 4(-3)(12)}}{2(-3)}$$

$$\frac{-9 \pm 15}{-6}$$

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

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

8) $x(-8x + 8) = -6$

$$\frac{-8 \pm \sqrt{82 - 4(-8)(6)}}{2(-8)}$$

$$\frac{-8 \pm 16}{-16}$$

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

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

9) $x(12x + 2) = 2$

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

$$\frac{-2 \pm 10}{24}$$

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

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

10) $x(-12x - 20) = 8$

$$\frac{20 \pm \sqrt{-202 - 4(-12)(-8)}}{2(-12)}$$

$$\frac{20 \pm 4}{-24}$$

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

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

Answers

1. **-1.00 , -1.00**

2. **4.00 , -5.00**

3. **-1.00 , 0.50**

4. **0.20 , -1.00**

5. **3.00 , 1.25**

6. **-1.50 , -0.50**

7. **-1.00 , 4.00**

8. **-0.50 , 1.50**

9. **0.33 , -0.50**

10. **-1.00 , -0.67**



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

Answers

1) $x(-3x + 7) = -6$

2) $x(-20x - 17) = 3$

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

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

4) $x(-6x + 7) = -5$

5) $x(-6x - 5) = -4$

6) $x(8x + 16) = -6$

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

8) $x(12x + 11) = 5$

9) $x(15x + 2) = 8$

10) $x(15x + 8) = -1$



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

1) $x(-3x + 7) = -6$

$$\frac{-7 \pm \sqrt{72 - 4(-3)(6)}}{-6}$$

$$\frac{-7 \pm 11}{-6}$$

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

$$x_- = -1$$

2) $x(-20x - 17) = 3$

$$\frac{17 \pm \sqrt{-172 - 4(-20)(-3)}}{-40}$$

$$\frac{17 \pm 7}{-40}$$

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

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

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

$$\frac{3 \pm \sqrt{-32 - 4(5)(-2)}}{10}$$

$$\frac{3 \pm 7}{10}$$

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

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

4) $x(-6x + 7) = -5$

$$\frac{-7 \pm \sqrt{72 - 4(-6)(5)}}{-12}$$

$$\frac{-7 \pm 13}{-12}$$

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

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

5) $x(-6x - 5) = -4$

$$\frac{5 \pm \sqrt{-52 - 4(-6)(4)}}{-12}$$

$$\frac{5 \pm 11}{-12}$$

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

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

6) $x(8x + 16) = -6$

$$\frac{-16 \pm \sqrt{162 - 4(8)(6)}}{16}$$

$$\frac{-16 \pm 8}{16}$$

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

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

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

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

$$\frac{24 \pm 16}{16}$$

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

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

8) $x(12x + 11) = 5$

$$\frac{-11 \pm \sqrt{112 - 4(12)(-5)}}{24}$$

$$\frac{-11 \pm 19}{24}$$

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

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

9) $x(15x + 2) = 8$

$$\frac{-2 \pm \sqrt{22 - 4(15)(-8)}}{30}$$

$$\frac{-2 \pm 22}{30}$$

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

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

10) $x(15x + 8) = -1$

$$\frac{-8 \pm \sqrt{82 - 4(15)(1)}}{30}$$

$$\frac{-8 \pm 2}{30}$$

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

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

Answers

1. **-0.67 , 3.00**

2. **-0.60 , -0.25**

3. **1.00 , -0.40**

4. **-0.50 , 1.67**

5. **-1.33 , 0.50**

6. **-0.50 , -1.50**

7. **2.50 , 0.50**

8. **0.33 , -1.25**

9. **0.67 , -0.80**

10. **-0.20 , -0.33**



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

Answers

1) $x(-5x - 1) = -4$

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

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

3) $x(20x - 10) = 10$

4) $x(12x - 8) = 4$

5) $x(-8x + 20) = 8$

6) $x(6x + 11) = -3$

7) $x(9x - 6) = 15$

8) $x(-16x + 4) = -12$

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

10) $x(4x + 7) = 15$



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

1) $x(-5x - 1) = -4$

$$\frac{1 \pm \sqrt{-12 - 4(-5)(4)}}{2}$$

$$\frac{1 \pm 9}{-10}$$

$$x_+ = -1$$

$$x_- = -5$$

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

$$\frac{11 \pm \sqrt{-112 - 4(20)(-3)}}{40}$$

$$\frac{11 \pm 19}{40}$$

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

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

3) $x(20x - 10) = 10$

$$\frac{10 \pm \sqrt{-102 - 4(20)(-10)}}{40}$$

$$\frac{10 \pm 30}{40}$$

$$x_+ = 1$$

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

4) $x(12x - 8) = 4$

$$\frac{8 \pm \sqrt{-82 - 4(12)(-4)}}{24}$$

$$\frac{8 \pm 16}{24}$$

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

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

5) $x(-8x + 20) = 8$

$$\frac{-20 \pm \sqrt{202 - 4(-8)(-8)}}{-16}$$

$$\frac{-20 \pm 12}{-16}$$

$$x_+ = -2$$

$$x_- = -1$$

6) $x(6x + 11) = -3$

$$\frac{-11 \pm \sqrt{112 - 4(6)(3)}}{-12}$$

$$\frac{-11 \pm 7}{-12}$$

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

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

7) $x(9x - 6) = 15$

$$\frac{6 \pm \sqrt{-62 - 4(9)(-15)}}{18}$$

$$\frac{6 \pm 24}{18}$$

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

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

8) $x(-16x + 4) = -12$

$$\frac{-4 \pm \sqrt{42 - 4(-16)(12)}}{-32}$$

$$\frac{-4 \pm 28}{-32}$$

$$x_+ = -4$$

$$x_- = -1$$

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

$$\frac{-10 \pm \sqrt{102 - 4(-15)(5)}}{-30}$$

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

$$x_+ = -3$$

$$x_- = -1$$

10) $x(4x + 7) = 15$

$$\frac{-7 \pm \sqrt{72 - 4(4)(-15)}}{8}$$

$$\frac{-7 \pm 17}{8}$$

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

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

Answers

1. **-1.00 , 0.80**

2. **0.75 , -0.20**

3. **1.00 , -0.50**

4. **1.00 , -0.33**

5. **0.50 , 2.00**

6. **-0.33 , -1.50**

7. **1.67 , -1.00**

8. **-0.75 , 1.00**

9. **-0.33 , 1.00**

10. **1.25 , -3.00**



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

Answers

1) $x(-4x + 5) = -6$

2) $x(-15x - 30) = 15$

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

3) $x(-8x - 2) = -1$

4) $x(-15x + 13) = 2$

5) $x(-10x + 4) = -6$

6) $x(-6x - 5) = -25$

7) $x(-16x - 16) = 4$

8) $x(15x + 2) = 1$

9) $x(9x - 12) = -4$

10) $x(-1x + 1) = -12$



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

1) $x(-4x + 5) = -6$

$$\frac{-5 \pm \sqrt{52 - 4(-4)(6)}}{-8}$$

$$\frac{-5 \pm 11}{-8}$$

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

$$x_- = -1$$

2) $x(-15x - 30) = 15$

$$\frac{30 \pm \sqrt{-302 - 4(-15)(-15)}}{-30}$$

$$\frac{30 \pm 0}{-30}$$

$$x_+ = -1$$

$$x_- = -1$$

3) $x(-8x - 2) = -1$

$$\frac{2 \pm \sqrt{-22 - 4(-8)(1)}}{-16}$$

$$\frac{2 \pm 6}{-16}$$

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

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

4) $x(-15x + 13) = 2$

$$\frac{-13 \pm \sqrt{132 - 4(-15)(-2)}}{-30}$$

$$\frac{-13 \pm 7}{-30}$$

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

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

5) $x(-10x + 4) = -6$

$$\frac{-4 \pm \sqrt{42 - 4(-10)(6)}}{-20}$$

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

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

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

6) $x(-6x - 5) = -25$

$$\frac{5 \pm \sqrt{-52 - 4(-6)(25)}}{-12}$$

$$\frac{5 \pm 25}{-12}$$

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

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

7) $x(-16x - 16) = 4$

$$\frac{16 \pm \sqrt{-162 - 4(-16)(-4)}}{-32}$$

$$\frac{16 \pm 0}{-32}$$

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

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

8) $x(15x + 2) = 1$

$$\frac{-2 \pm \sqrt{22 - 4(15)(-1)}}{-30}$$

$$\frac{-2 \pm 8}{-30}$$

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

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

9) $x(9x - 12) = -4$

$$\frac{12 \pm \sqrt{-122 - 4(9)(4)}}{18}$$

$$\frac{12 \pm 0}{18}$$

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

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

10) $x(-1x + 1) = -12$

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

$$\frac{-1 \pm 7}{-2}$$

$$x_+ = -1$$

$$x_- = -1$$

Answers

1. **-0.75 , 2.00**

2. **-1.00 , -1.00**

3. **-0.50 , 0.25**

4. **0.20 , 0.67**

5. **-0.60 , 1.00**

6. **-2.50 , 1.67**

7. **-0.50 , -0.50**

8. **0.20 , -0.33**

9. **0.67 , 0.67**

10. **-3.00 , 4.00**



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

Answers

1) $x(3x + 13) = 10$

2) $x(6x + 12) = -6$

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

3) $x(-3x + 3) = -6$

4) $x(10x - 29) = -10$

5) $x(15x + 4) = 4$

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

7) $x(-4x + 13) = 10$

8) $x(16x + 0) = 16$

9) $x(2x - 10) = -8$

10) $x(20x + 31) = -12$



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

1) $x(3x + 13) = 10$

$$\frac{-13 \pm \sqrt{13^2 - 4(3)(-10)}}{2(3)}$$

$$\frac{-13 \pm 17}{6}$$

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

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

2) $x(6x + 12) = -6$

$$\frac{-12 \pm \sqrt{12^2 - 4(6)(-6)}}{2(6)}$$

$$\frac{-12 \pm 0}{12}$$

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

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

3) $x(-3x + 3) = -6$

$$\frac{-3 \pm \sqrt{3^2 - 4(-3)(-6)}}{2(-3)}$$

$$\frac{-3 \pm 9}{-6}$$

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

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

4) $x(10x - 29) = -10$

$$\frac{29 \pm \sqrt{29^2 - 4(10)(-10)}}{2(10)}$$

$$\frac{29 \pm 21}{20}$$

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

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

5) $x(15x + 4) = 4$

$$\frac{-4 \pm \sqrt{4^2 - 4(15)(-4)}}{2(15)}$$

$$\frac{-4 \pm 16}{30}$$

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

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

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

$$\frac{-20 \pm \sqrt{20^2 - 4(-4)(-25)}}{2(-4)}$$

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

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

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

7) $x(-4x + 13) = 10$

$$\frac{-13 \pm \sqrt{13^2 - 4(-4)(-10)}}{2(-4)}$$

$$\frac{-13 \pm 3}{-8}$$

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

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

8) $x(16x + 0) = 16$

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

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

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

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

9) $x(2x - 10) = -8$

$$\frac{10 \pm \sqrt{10^2 - 4(2)(-8)}}{2(2)}$$

$$\frac{10 \pm 6}{4}$$

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

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

10) $x(20x + 31) = -12$

$$\frac{-31 \pm \sqrt{31^2 - 4(20)(-12)}}{2(20)}$$

$$\frac{-31 \pm 1}{40}$$

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

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

Answers

1. **0.67 , -5.00**

2. **-1.00 , -1.00**

3. **-1.00 , 2.00**

4. **2.50 , 0.40**

5. **0.40 , -0.67**

6. **2.50 , 2.50**

7. **1.25 , 2.00**

8. **1.00 , -1.00**

9. **4.00 , 1.00**

10. **-0.75 , -0.80**



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

Answers

1) $x(25x + 5) = 2$

2) $x(8x + 16) = -6$

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

3) $x(8x + 10) = 3$

4) $x(9x - 27) = -20$

5) $x(5x - 8) = 4$

6) $x(8x - 18) = -4$

7) $x(-3x - 11) = 10$

8) $x(3x + 13) = -12$

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

10) $x(12x - 23) = -10$



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

1) $x(25x + 5) = 2$

$$\frac{-5 \pm \sqrt{52 - 4(25)(-2)}}{50}$$

$$\frac{-5 \pm 15}{50}$$

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

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

2) $x(8x + 16) = -6$

$$\frac{-16 \pm \sqrt{162 - 4(8)(6)}}{16}$$

$$\frac{-16 \pm 8}{16}$$

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

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

3) $x(8x + 10) = 3$

$$\frac{-10 \pm \sqrt{102 - 4(8)(-3)}}{16}$$

$$\frac{-10 \pm 14}{16}$$

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

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

4) $x(9x - 27) = -20$

$$\frac{27 \pm \sqrt{-272 - 4(9)(20)}}{18}$$

$$\frac{27 \pm 3}{18}$$

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

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

5) $x(5x - 8) = 4$

$$\frac{8 \pm \sqrt{-82 - 4(5)(-4)}}{10}$$

$$\frac{8 \pm 12}{10}$$

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

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

6) $x(8x - 18) = -4$

$$\frac{18 \pm \sqrt{-182 - 4(8)(4)}}{16}$$

$$\frac{18 \pm 14}{16}$$

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

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

7) $x(-3x - 11) = 10$

$$\frac{11 \pm \sqrt{-112 - 4(-3)(-10)}}{11}$$

$$\frac{11 \pm 1}{-6}$$

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

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

8) $x(3x + 13) = -12$

$$\frac{-13 \pm \sqrt{132 - 4(3)(12)}}{6}$$

$$\frac{-13 \pm 5}{6}$$

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

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

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

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

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

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

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

10) $x(12x - 23) = -10$

$$\frac{23 \pm \sqrt{-232 - 4(12)(10)}}{24}$$

$$\frac{23 \pm 7}{24}$$

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

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

Answers

1. **0.20 , -0.40**

2. **-0.50 , -1.50**

3. **0.25 , -1.50**

4. **1.67 , 1.33**

5. **2.00 , -0.40**

6. **2.00 , 0.25**

7. **-2.00 , -1.67**

8. **-1.33 , -3.00**

9. **1.00 , 2.00**

10. **1.25 , 0.67**



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

Answers

1) $x(6x + 4) = 16$

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

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

3) $x(-5x + 9) = -2$

4) $x(-3x + 8) = -3$

5) $x(-10x + 0) = -10$

6) $x(-16x + 16) = 4$

7) $x(-6x + 16) = 8$

8) $x(-20x - 13) = 2$

9) $x(20x + 10) = 10$

10) $x(25x - 20) = -3$



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

1) $x(6x + 4) = 16$

$$\frac{-4 \pm \sqrt{42 - 4(6)(-16)}}{12}$$

$$\frac{-4 \pm 20}{12}$$

$$\frac{4}{3}$$

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

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

$$x_- = -1$$

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

$$\frac{10 \pm \sqrt{-102 - 4(3)(-25)}}{6}$$

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

$$\frac{5}{1}$$

$$x_+ = 1$$

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

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

3) $x(-5x + 9) = -2$

$$\frac{-9 \pm \sqrt{92 - 4(-5)(2)}}{-10}$$

$$\frac{-9 \pm 11}{-10}$$

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

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

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

$$x_- = -1$$

4) $x(-3x + 8) = -3$

$$\frac{-8 \pm \sqrt{82 - 4(-3)(3)}}{-6}$$

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

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

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

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

$$x_- = -1$$

5) $x(-10x + 0) = -10$

$$\frac{-0 \pm \sqrt{2 - 4(-10)(10)}}{-20}$$

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

$$\frac{1}{-1}$$

$$x_+ = -1$$

$$\frac{-1}{-1}$$

$$x_- = -1$$

6) $x(-16x + 16) = 4$

$$\frac{-16 \pm \sqrt{162 - 4(-16)(-4)}}{-32}$$

$$\frac{-16 \pm 0}{-32}$$

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

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

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

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

7) $x(-6x + 16) = 8$

$$\frac{-16 \pm \sqrt{162 - 4(-6)(-8)}}{-12}$$

$$\frac{-16 \pm 8}{-12}$$

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

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

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

$$x_- = -1$$

8) $x(-20x - 13) = 2$

$$\frac{13 \pm \sqrt{-132 - 4(-20)(-2)}}{-40}$$

$$\frac{13 \pm 3}{-40}$$

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

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

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

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

9) $x(20x + 10) = 10$

$$\frac{-10 \pm \sqrt{102 - 4(20)(-10)}}{-40}$$

$$\frac{-10 \pm 30}{40}$$

$$\frac{1}{2}$$

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

$$\frac{-1}{1}$$

$$x_- = -1$$

10) $x(25x - 20) = -3$

$$\frac{20 \pm \sqrt{-202 - 4(25)(3)}}{50}$$

$$\frac{20 \pm 10}{50}$$

$$\frac{3}{5}$$

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

$$\frac{1}{5}$$

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

Answers

1. **1.33 , -2.00**

2. **5.00 , -1.67**

3. **-0.20 , 2.00**

4. **-0.33 , 3.00**

5. **-1.00 , 1.00**

6. **0.50 , 0.50**

7. **0.67 , 2.00**

8. **-0.40 , -0.25**

9. **0.50 , -1.00**

10. **0.60 , 0.20**