

Key

Math 1

Name _____

Date _____

1-1 Rounding and Solving Equations 2

Learning Goals:

- I can solve equations for a specified variable.

Round the following numbers to the nearest hundredth:

1. 10.056756

10.06

2. -2.541499

-2.54

3. 2.4963

2.50

Solve the following and round your answers to the nearest thousandths:

4. $5 = -2x + 7x$

$5 = 5x$

$1 = x$

5. $2x + 5 = 5x$

$5 = 3x$

$\frac{5}{3} = x = 1.667$

6. $3x + 5.2 - 1.2x = 7$

$1.8x + 5.2 = 7$

$1.8x = 1.8$

$x = 1$

7. $2x + 2x = -7$

$4x = -7$

$x = -\frac{7}{4} = -1.75$

8. $x - 7 = 3x$

$-x - x$

$-7 = 2x$

$x = -\frac{7}{2} = -3.5$

9. $x + 5 = 3 + x$

$-x -x$

$0 + 5 = 3 - 5$

$0 = -2$

No solutions

10. $2x - 5x = 10$

$-3x = 10$

$x = -\frac{10}{3} = -3.333$

11. $3x + 7 = 10 - 3x$

$6x + 7 = 10$

$6x = 3$

$x = \frac{3}{6} = \frac{1}{2} = 0.5$

12. $5x = 3(x + 5)$

$5x = 3x + 15$

$2x = 15$

$x = 7.5$

13. $2(x - 4) = 4$

$2x - 8 = 4$

$\frac{2x}{2} = \frac{12}{2}$

$x = 6$

14. $-3(x + 10) = 12$

$-3x - 30 = 12$

$-3x = 42$

$x = -14$

15. $-7(x - 3) = 15$

$-7x + 21 = 15$

$-7x = -6$

$x = \frac{-6}{-7} \approx 0.857$

$$16. 6(x+2) = -11(1-x)$$

$$6x + 12 = -11 + 11x$$

$$12 = -11 + 5x$$

$$23 = 5x$$

$$\frac{23}{5} = \boxed{4.6 = x}$$

$$17. -2(x+10) = 2(3-5x)$$

$$-2x - 20 = 6 - 10x$$

$$8x - 20 = 6$$

$$8x = 26$$

$$\boxed{x = 3.25}$$

$$18. 3x = 9$$

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

$$\boxed{x = 3}$$

$$19. 2x = 5.4$$

$$\boxed{x = 2.7}$$

$$20. -3x = 14$$

$$\boxed{x \approx -4.667}$$

$$21. -25 = -3.7x$$

$$\boxed{x \approx 6.757}$$

$$22. \left(\frac{x}{2} = 10\right) \cdot 2$$

$$\boxed{x = 20}$$

$$23. \left(\frac{3}{x} = -2.5\right) \cdot x$$

$$\frac{3}{-2.5} = \frac{-2.5x}{-2.5}$$

$$\boxed{x = -1.2}$$

$$24. \left(\frac{-2x}{3} + 4 = 12\right) \cdot 3$$

$$-2x + 12 = 36$$

$$-2x = 24$$

$$\boxed{x = -12}$$

$$25. \left(\frac{3x}{4} + 5x = 7\right) \cdot 4$$

$$3x + 20x = 28$$

$$23x = 28$$

$$x = \frac{28}{23} \approx \boxed{1.217}$$

$$26. \left(\frac{2x}{6} - 5 = \frac{3x}{4}\right) \cdot 12 \quad \text{or } \cdot 24$$

$$4x - 60 = 9x$$

$$-60 = 5x$$

$$\boxed{-12 = x}$$

$$27. \left(3 = \frac{2}{3}(x-5) + 4x\right) \cdot 3$$

$$9 = 2(x-5) + 12x$$

$$9 = 2x - 10 + 12x$$

$$19 = 14x$$

$$\frac{19}{14} \approx \boxed{1.357 = x}$$