

CHAPTER 1 PRACTICE TEST

Solving Linear Equations

Name _____

Date _____

Show organized algebraic work. Check each solution in Part I.

PART I SOLVE AND CHECK

1. Solve $n - 3.8 = 4.7$.

Answer: _____

2. Solve $-7p = 56$.

Answer: _____

3. Solve $\frac{x}{-6} = 4$.

Answer: _____

4. Solve $3(2y - 5) + 4 = 25$.

Answer: _____

5. Solve $\frac{3}{4}w - \frac{1}{2}w - 3 = 5$.

Answer: _____

PART II CLASSIFY EQUATIONS

Solve each equation. State whether it has **one solution**, **no solution**, or **infinitely many solutions**. Show the final statement that supports your classification.

6. $5a + 9 = 2a - 6$

Answer: _____

7. $4(2b + 3) = 8b + 12$

Answer: _____

8. $6(2c - 1) = 12c + 4$

Answer: _____

PART III REWRITE FORMULAS

Isolate the requested variable. Equivalent simplified forms are acceptable.

9. Solve $5x - 2y = 18$ for y .

Answer: _____

10. Solve $P = 2L + 2W$ for W .

Answer: _____

PART III REWRITE FORMULAS CONTINUED

11. The area of a triangle is $A = \frac{1}{2}bh$. Solve the formula for h . Then find h when $A = 63 \text{ cm}^2$ and $b = 9 \text{ cm}$. Include units.

Answer: _____

PART IV MODEL AND REASON

Write an equation before solving each situation. Show enough work that another student could follow your reasoning.

12. Plan A costs 12 plus 5 per class. Plan B costs 30 plus 2 per class. After how many classes will the plans cost the same? What will that cost be?

Answer: _____

13. The angles of a triangle measure $(x + 10)^\circ$, $(2x + 5)^\circ$, and $(3x + 3)^\circ$. Find x and all three angle measures.

Answer: _____

14. A student begins solving $4(2x - 3) = 20$ as shown below.

$$8x - 3 = 20$$

$$8x = 23$$

$$x = \frac{23}{8}$$

Identify the first error. Correct the work and verify the correct solution in the original equation.

Answer: _____