

Name: _____ Hr: _____

Math 8 Unit 2 PreTest - Solving Linear Equations

_____ / 38 points

Multiple Choice.

1. (1 point) Solve the equation. $w + 12 = 26$

- A. -38
- B. 14**
- C. 38
- D. -14

$$\begin{array}{r} -12 \quad -12 \\ w + 12 = 26 \\ \hline w = 14 \end{array}$$

2. (1 point) Find the solution $\frac{k}{-2} = -27$ (-2)

- A. $\frac{27}{2}$
- B. -25
- C. -29
- D. 54**

$$\begin{array}{r} k \\ -2 \\ \hline k = 54 \end{array}$$

3. (1 point) Solve for p.

- A. 27
- B. -4**
- C. 41
- D. -57

$$\begin{array}{r} -9p - 42 = -6 \\ +42 \quad +42 \\ \hline -9p = 36 \\ -9 \quad -9 \\ \hline p = -4 \end{array}$$

4. (1 point) Solve.

- A. -85
- B. -12
- C. 15**
- D. 8

$$\begin{array}{r} \frac{w}{5} - 10 = -7 \\ +10 \quad +10 \\ \hline \frac{w}{5} = 3 \\ (5) \frac{w}{5} = 3(5) \\ \hline w = 15 \end{array}$$

5. (1 point) What are the solutions?

$$3n - 8 + 4n = 48$$

- A. -8
- B. 8**
- C. 10
- D. 5

$$\begin{array}{r} 7n - 8 = 48 \\ +8 \quad +8 \\ \hline 7n = 56 \\ \frac{7n}{7} = \frac{56}{7} \\ n = 8 \end{array}$$

6. (1 point) Solve. $-6x + 8 + 3x = 8 - 3x$

- A. $-2\frac{2}{3}$
- B. 0
- C. No Solution
- D. Infinitely Many Solution**

$$\begin{array}{r} -6x + 8 = 8 - 3x \\ +3x \quad +3x \\ \hline -3x + 8 = 8 - 3x \\ +3x \quad +3x \\ \hline 8 = 8 \end{array}$$

7. (1 point) What would you do first to solve this equation?

$$-7 \left(8 - \frac{2}{3}x \right)$$

- A. subtract 8**
- B. multiply by $-\frac{3}{2}$
- C. add 7
- D. add 8

Write and solve an equation.

8. (1 point) Jessie is saving money to buy a new phone that costs \$98. She plans to save \$7 per week. How many weeks w will it take her to save \$98?

- A. $\frac{w}{7} = 98$; 14 weeks
- B. $w - 98 = 7$; 105 weeks
- C. $7w = 98$; 14 weeks**
- D. $7 + w = 98$; 91 weeks

Repeat

$$7 + 7 + 7 + \dots = 98$$

$$7w = 98$$

Show all work!!!

One Solution Infinitely Many Solutions No Solution
 (I.M.S.)
 $x = 3$ $5 = 5$ $5 = 4$

9. (2 points) Solve the equation. $\frac{9d}{18} = \frac{95}{18}$

$$\frac{9d}{18} = \frac{95}{18}$$

$$d = 5$$

10. (2 points) Find the solution. $7x + 5 = -9$

$$7x + 5 = -9$$

$$7x = -14$$

$$x = -2$$

11. (2 points) Solve. $\frac{1}{3}d + 7 = 4$

$$\frac{1}{3}d + 7 = 4$$

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

$$d = -9$$

12. (3 points) Find the value of y. $5(y - 5) = 25$

$$5y - 25 = 25$$

$$5y = 50$$

$$y = 10$$

13. (3 points) Solve for x. $7x - 6 = 2x + 41$

$$7x - 6 = 2x + 41$$

$$5x = 47$$

$$x = 7$$

14. (3 points) Solve. $-3(m + 20) = 3m$

$$-3m + 60 = 3m$$

$$60 = 6m$$

$$m = 10$$

15. (3 points) Find the solution. $9(x + 4) = 27 + 9x$

$$9x + 36 = 27 + 9x$$

$$36 = 27$$

No Sol.

16. (3 points) Ariel solved the following problem. Explain her 2 errors and correct them.

$4x + 1 = 3(x - 7)$ $4x + 1 = 3x - 7$ $7x + 1 = -7$ $7x = -7$ $x = -1$	What are the 2 errors? 1 Didn't mult 3·7 2 Didn't sub. 4x-3x Didn't sub 1 $4x + 1 = 3x - 21$ $x + 1 = -21$
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$$x = -22$$

17. (4 points) Six Banners Amusement Park has a new pricing plan. It only costs \$15 to get into the park but they charge \$4 for every ride. If you have \$63 to spend, how many rides can you go on?

variable $One\ Time + Repeat = Total$

<p>a. Define your variable. (1 point)</p> <p>$x = \text{rides}$</p>	<p>b. Write an equation. (1 point)</p> $\begin{array}{r} \$15 + \$4x = \$63 \\ -15 \quad -15 \\ \hline \end{array}$	<p>c. Solve the equation. (2 points)</p> $\begin{array}{r} 4x = 48 \\ \frac{4x}{4} = \frac{48}{4} \\ x = 12 \text{ rides} \end{array}$
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18. (5 points) In July ³¹ Andrea is going to live with her grandparents in Florida for a month and wants to join a gym while she is there. Gym A charges \$5 per day to use the facility. Gym B charges a membership fee of \$90 and only \$1.25 per day to use it. After how many days will the gyms be the same cost?

<p>a. Define your variable. (1 point)</p> <p>$x = \text{days}$</p>	<p>b. Write an equation. (1 point)</p> <p>Opt 1 Opt 2 A B</p> $\begin{array}{r} \$5x = \$90 + \$1.25x \\ -1.25x \quad -1.25x \\ \hline \end{array}$ <p>COMPARE</p>	<p>c. Solve the equation. (2 points)</p> $\begin{array}{r} 3.75x = 90 \\ \frac{3.75x}{3.75} = \frac{90}{3.75} \\ x = 24 \text{ days} \end{array}$
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d. Andrea plans to go to the gym every day while in Florida visiting her grandparents. Which gym she should join and why (show the cost of each option)? (1 point)

A	B	Andrea should go to Gym B
$5(31)$ $\$155$	$90 + 1.25(31)$ $90 + 38.75$ $\$128.75$	