

## Review for Test #3 - Algebraic Linear Equations

Name: \_\_\_\_\_ Class: \_\_\_\_\_

- 1.) What is another way of saying that an equation has infinite solutions? \_\_\_\_\_
- 2.) What is another way of saying that an equation has no solution? \_\_\_\_\_
- 3.) Find three consecutive integers whose sum is -87.
  
  
  
  
  
  
  
  
  
  
- 4.) Find three consecutive even integers such that three times the sum of the first and the third is 24 more than two times the second.



Solve the following equations:

5.)  $7x + 2 = 5x - 10$

6.)  $3p + 4 = 3(p + 1)$

$$7.) \quad 5h + 3 - 2h + 4 = 2h + 9 + h - 2$$

$$8.) \quad \frac{x - 6}{5} = 14$$

$$9.) \quad 0.2(x + 50) - 6 = 0.4(3x + 20)$$

$$10.) \quad 10p - 2(3p - 6) = 4(3p - 6) - 8p$$

$$11.) \quad -27 - 15 = -12h + 4h - 3 + 15 - h$$

$$12.) \quad \frac{3x}{4} + \frac{x}{3} = \frac{13}{6}$$



13.)  $8 - 3y = 35$

$$\frac{2}{3}(x - 9) = -4(x - 5) - 12$$

14.)

15.)  $1.2x + 37 = 4.2x - 8$

$$\frac{3x - 2}{8} + \frac{2 - x}{4} = -\frac{1}{2}$$

16.)

17.) Matthew has a cousin who is five years older than he is. The sum of their ages is 31. How old is Matthew's cousin?

18.) Leah and Alexis went shopping and spent a total of \$32.50. Alexis spent \$9.50 more than Leah did. How much did they each spend?

For 19 – 22, isolate  $y$ .

19.)  $y - 5 = 2x$

20.)  $3y = 9x - 12$

21.)  $x - y = 7$

22.)  $3x - 2y = 9$

**Answers:**

1.) identity

3.) -30, -29, -28

5.)  $x = -6$

7.) infinite solutions

9.)  $x = -2$

11.)  $h = 6$

13.)  $y = -9$

15.)  $x = 15$

17.) 18 yrs.

19.)  $y = 2x + 5$

21.)  $y = x - 7$

2.) null set

4.) 4, 6, 8

6.) no solutions

8.)  $x = 76$

10.) no solutions

12.)  $x = 2$

14.)  $x = 3$

16.)  $x = -6$

18.) Leah: \$11.50; Alexis: \$21

20.)  $y = 3x - 4$

22.)  $y = \frac{3}{2}x - 4$

