

Name: \_\_\_\_\_ Date: \_\_\_\_\_

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**Math\_Questions\_0039**

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1. Determine which two equations represent parallel lines.

(a)  $y = \frac{2}{9}x + 2$

(b)  $y = \frac{9}{2}x + 4$

(c)  $y = \frac{9}{2}x - 4$

(d)  $y = -\frac{2}{9}x + 4$

2. Given  $f(x) = x^2 - 2x + 4$ , find  $f(0)$ .

3. Graph  $f(x) = -x - 2$ .

4. Graph the inequality.  
 $y \geq 1$

5. Graph  $f(x) = -2x + 2$ .

6. Graph  $f(x) = 4x + 1$ .

7. An airplane covered 15 miles of its route while decreasing its altitude by 20,000 feet. Find the slope of the airplane's line of descent. Round to the nearest hundredth. [Hint: 1 mi = 5280 feet.]

8. Find the slope and y-intercept.  
 $2x + 7y = -49$

9. Write the equation of the line passing through  $(-6, -32)$  and  $(2, 16)$ .

10. Graph the inequality.  
 $2x + 3y > 6$

11. Solve the following system of linear inequalities by graphing.

$$x - 3y > 6$$

$$3x + 2y > 12$$

12. Solve the system by graphing.

$$x - y = 5$$

$$x + y = 3$$

13. The sum of two numbers is 34. Their difference is 6. What are the two numbers?
14. Solve the system by substitution.  
$$3x - y = -7$$
$$x + y = -9$$
15. The sum of two numbers is 96. The second is 8 more than 3 times the first. What are the two numbers?
16. Solve the system by graphing.  
$$x - y = -3$$
$$x - y = 4$$
17. Adult tickets for a play cost \$15 and child tickets cost \$7. If there were 26 people at a performance and the theater collected \$262 from ticket sales, how many adults and how many children attended the play?
18. Solve the system by graphing.  
$$x + y = 4$$
$$-x + y = 2$$
19. Lane invested \$36,000, part at 3% and part at 11%. If the total interest at the end of the year is \$2,360, how much did she invest at each rate?
20. Solve the system by addition.  
$$5x - 3y = 13 \quad (\text{equation 1})$$
$$4x - 3y = 11 \quad (\text{equation 2})$$