

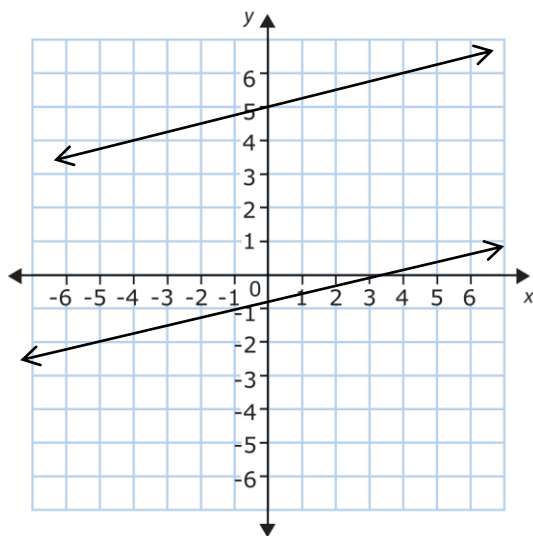
1. Explain what $g(x) = f(x) + k$ means.
2. If $f(x) = 3x - 5$ and $g(x) = f(x) - 4$, then $g(x) =$ _____
3. If $f(x) = 6(2)^x$ and $g(x) = f(x) + 5$, then $g(x) =$ _____ and then find $g(3)$.
4. Complete table: $g(x) = f(x) - 3$, if $f(x) = 2x - 1$

x	f(x)	g(x)
0		
1		
2		
3		

For the next 2 questions show all of your work and explain why each quadrilateral is a special quadrilateral.

5. Prove ABCD is a parallelogram if $A(1,5)$, $B(2,3)$, $C(-1,-3)$, and $D(-2,-1)$

6. Prove WXYZ is a rectangle if $W(-3,3)$, $X(-1,2)$, $Y(-4,-4)$ and $Z(-6,-3)$



7. Use the graph above to fill out the table below

Translation Form Equation $f(x) =$ $g(x) =$

Slope intercept form equation $f(x) =$ $g(x) =$

8. Hey, remember Mariah and Fernando training for the half marathon? Well, now they want to train for the full marathon. Mariah got a head start and ran 40 more laps than Fernando last week. On Saturday, they train together and the table below shows what Mariah and Fernando had run this past Saturday.

Time (in minutes on Saturday)	0	10	20	30	40	50	60
Fernando: Distance (in laps)							
Mariah: Distance (in laps)	60	68	76	84			

a) Complete the table for Fernando and Mariah.

b) Write the equation for each runner in slope-intercept form.

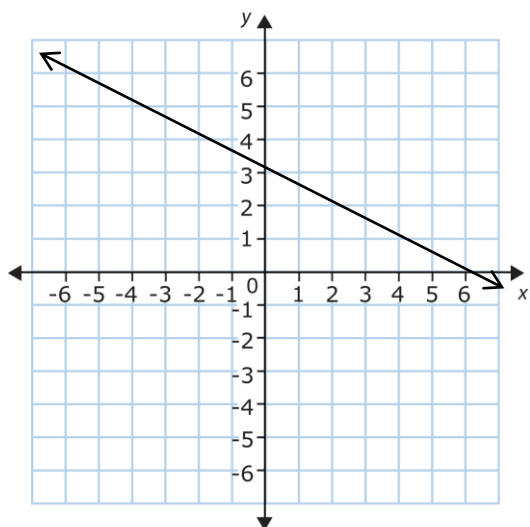
c) Write the translation form: $f(t) = m(t)$ _____ and $m(t) = f(t)$ _____

9. What is the slope between the points (7, -3) and (-6, 10)?

10. What is the distance between the points (9, -4) and (-2, 8)?

Review Questions

Use this graph for # 11 – 13.



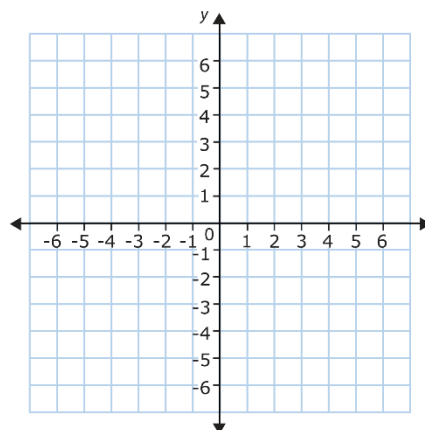
11. What is the equation of the given line.

12. Graph a line **parallel** to the given line **and** write the equation.

13. Graph a line **perpendicular** to the given line **and** write the equation.

14. The vertices of $\triangle ABC$ are $A(-5, -1)$, $B(-4, 7)$, and $C(-1, 1)$.

Graph the image of $\triangle ABC$ then graph each transformation in the order they are listed.



a. **Translation:** $(x, y) \rightarrow (x + 5, y - 3)$

b. **Rotation:** 90° counterclockwise about the origin

15. Solve the system using Elimination: $6x + 5y = -3$
 $5x + 8y = 9$

16. Solve for x: $6(4x - 3) - 3x = 4(2x - 5) - 5x + 11 - 7x$

17. Given the table of values, write an explicit equation.

a)

X	Y
0	11
1	22
2	44
3	88
4	176

b)

X	Y
0	6
1	-11
2	-28
3	-45
4	-62

18. Write an equation of a line that passes through the points $(-5, -3)$ and $(-9, 8)$.

19. Determine the following from the diagram below:

a) The domain

b) The Range

c) The intervals where function is increasing.

d) The intervals where the function is decreasing.

e) If $x = -4$, $f(x) = \underline{\hspace{2cm}}$

f) If $f(x) = 5$, $x = \underline{\hspace{2cm}}$

