

MAKING CONNECTIONS: LINEAR FUNCTIONS

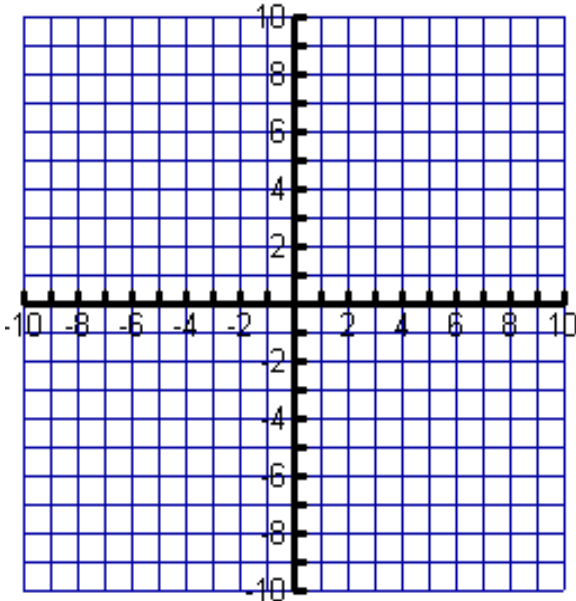
EQUATION: $-2x + 4y = 8$

Write the equation in slope-intercept form:

TABLE

x	y

GRAPH THE LINE



VERBAL

On the graph of the function, when the value of x increases by ___ unit(s), the value of y _____ by ___ unit(s).

The parent function of the given graph is _____.

Use the answers from above to help you answer the following questions.

1. What are the intercepts of the original graph?

x-intercept: _____ y-intercept: _____

2. If the slope of this line is multiplied by -1 and the y -intercept decreases by 2 units, what is the linear equation that represents these changes?

New Equation: _____

3. How does the graph of $-4x + 2y = 8$ compare to the original graph of $-2x + 4y = 8$?

True or False

- _____ a) The slope of the original graph is steeper.
- _____ b) The slope of the original graph is less steep.
- _____ c) The original graph has a greater y-intercept.
- _____ d) The original graph has a smaller y-intercept.

4. Write the equation of a line that passes through the point (4, 7) and is parallel to the original graph.

New Equation: _____

5. If (6, y) is a point on the graph of the original function, what is the value of y?

Answer: _____

6. Complete the following statement for the equation $y = \frac{2}{3}x - 6$.

As the value of x increases by _____ unit(s), the value of y _____
by _____ unit(s).