Date: _____

6.3 Graphing Linear Equations

***MathLinks 9*, pages 231–243**

Key Ideas Review

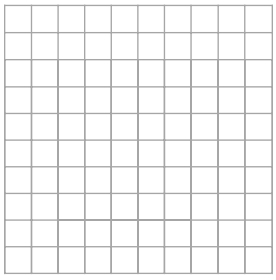
Select the terms in column B that complete the sentences in column A.

A	B
1. A(n) _____, such as $x = y - 5$, can be used to create a table of values. **2.** You can use _____ pairs developed in a table of values to graph the _____. **3.** Graphs can be used to _____ or _____ values when solving problems.	**a)** coordinate **b)** equation **c)** extrapolate **d)** interpolate **e)** linear relation

Check Your Understanding

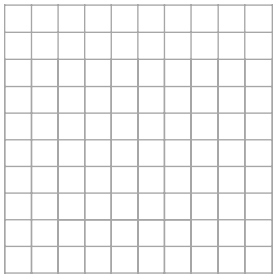
4. Create a graph and a table of values for each linear equation.

a) $x = -3$



x	*y*
	−5
	3

b) $k = -2m + 5.5$



m	*k*

5. Create a linear equation for each table of values.

a)

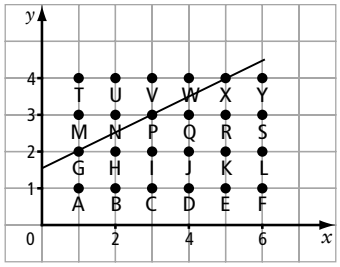
x	*y*
4	−7.75
3	−5.75
2	−3.75
1	−1.75
0	0.25
−1	2.25

b)

x	*y*
15	−7.5
13	−6.5
11	−5.5
9	−4.5
7	−3.5

Date: _____

6. The line q passes through the three points G, P, and X.

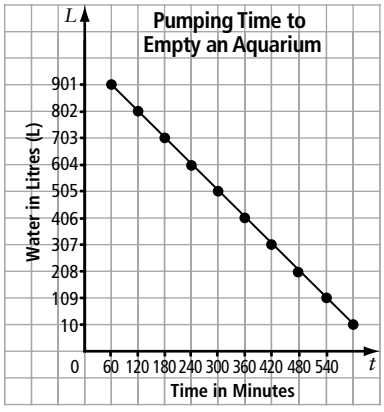


a) What is the linear equation for the line q?

b) Write the linear equation of another line that passes through three letters. Identify the line.

c) Write an equation for a line that passes through at least four letters. Identify the line.

7. An aquarium holds 1000 L. The graph shows the relationship between time, t, and the number of litres, L, of water pumped from the aquarium.



a) What is the linear equation?

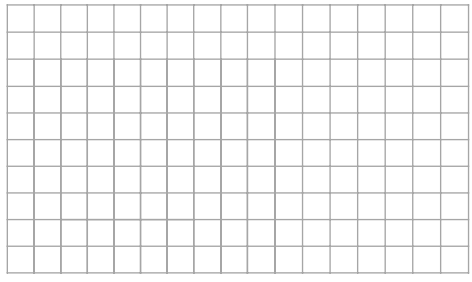
b) How long would it take to pump approximately 750 L of water? What method did you use?

c) Jomari states that it would take about 15 h to empty a 1500-L aquarium. Do you agree or disagree with Jomari? Explain.

8. Alex and Zoe live beside each other. Alex leaves home at 9:00 a.m., walking at a steady speed of 1 km per 20 min. Zoe leaves home at 9:30 a.m. and jogs after Alex at a steady speed of 1.25 km per 15 min.

a) Create tables of values for both Alex and Zoe. Include at least five values.

b) Graph the results of both tables. Identify each relation.



c) At approximately what time will Zoe catch Alex?

d) If they continued at the same pace, how far apart would they be at 10:30 a.m.?