Name: _____ Date: _____

BLM 9–4

Chapter 9 Problems of the Week

1. Study the pattern to determine the linear equation used to create the values of y in the table. Plot these points on a coordinate grid. Is it easier to find the relationship between the variables from the table or from your graph? Explain.

x	0	1	2	3	4	5
y	1	4	7	10	13	16

2. Follow the steps below to make up a question like #1 for a classmate:

- Make up a linear equation. You may want to look in your student resource for some ideas.
- Create a table of values.
- Make a graph from the table of values.
- Give the table and the graph to your classmate.

Can your classmate determine the equation that you used?

3. Jesse does not know how to graph the equation $y = x - 6$. Provide a set of instructions that Jesse can use so that he will be able to graph this linear equation or any other equation in the future.

4. Point (3, 5) is one of the coordinates created by the linear equation $y = 4x + b$. What is the value of b?

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(continued)

5. Copy and complete the two tables of values before you answer the questions below.

x	$y = x - 4$
−2	
−1	
0	
1	
2	
3	
4	
5	

x	$y = 3x - 6$
−2	
−1	
0	
1	
2	
3	
4	

a) For these two equations, as the value of x decreases beyond −2, will the value of y always decrease? Why or why not?

b) For these two equations, as the value of x increases beyond 5, will the value of y always increase? Why or why not?

c) What value for x results in equal values for y in both equations?

d) Plot the two equations on a grid. What do you notice about the points for these equations? Explain.

6. Find at least ten equivalent fractions for each of these fractions: $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, and $\frac{1}{5}$.

a) Graph the equivalent fractions, where the numerators are along the x-axis and the denominators are along the y-axis. Use a different colour for each set of equivalent fractions.

b) Which fractions have common points?

c) Can you write an algebraic equation for each fraction?

d) How could this graph help you find an equivalent fraction in lowest terms?