Lesson 6 Practice Problems

1. Explain what the slope and intercept mean in each situation.

   a. A graph represents the perimeter, y, in units, for an equilateral triangle with side length x units. The slope of the line is 3 and the y-intercept is 0.

   b. The amount of money, y, in a cash box after x tickets are purchased for carnival games. The slope of the line is $\frac{1}{4}$ and the y-intercept is 8.

   c. The number of chapters read, y, after x days. The slope of the line is $\frac{5}{4}$ and the y-intercept is 2.

   d. The graph shows the cost in dollars, y, of a muffin delivery and the number of muffins, x, ordered. The slope of the line is 2 and the y-intercept is 3.

2. Customers at the gym pay a membership fee to join and then a fee for each class they attend. Here is a graph that represents the situation.

   a. What does the slope of the line shown by the points mean in this situation?

   b. What does the vertical intercept mean in this situation?

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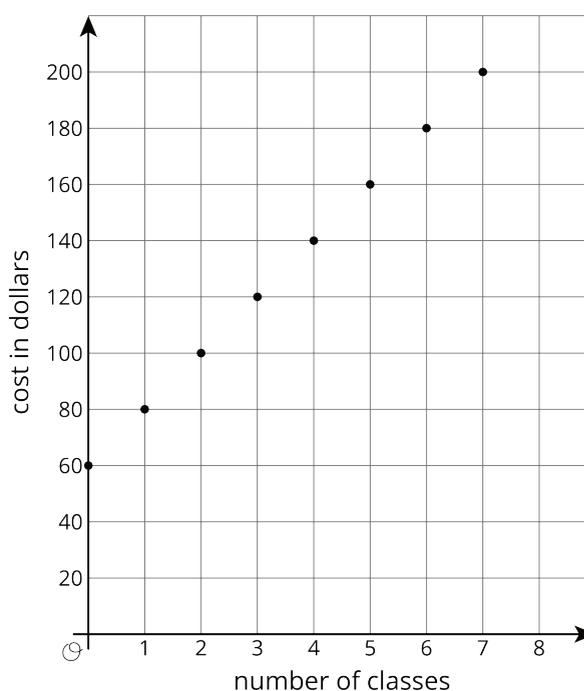
3. The graph shows the relationship between the number of cups of flour and the number of cups of sugar in Lin's favorite brownie recipe.
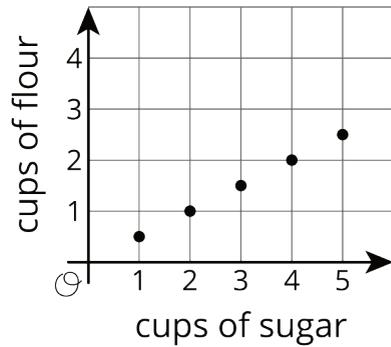
The table shows the amounts of flour and sugar needed for Noah's favorite brownie recipe.

cups of sugar	cups of flour
$\frac{3}{2}$	1
3	2
$4\frac{1}{2}$	3

a. Noah and Lin buy a 12-cup bag of sugar and divide it evenly to make their recipes. If they each use all their sugar, how much flour do they each need?

b. Noah and Lin buy a 10-cup bag of flour and divide it evenly to make their recipes. If they each use all their flour, how much sugar do they each need?

(From Unit 3, Lesson 4.)

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