7.RP.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. [1]

1. Mr. Miller uses $\frac{1}{2}$ cup of kale for every $\frac{3}{4}$ cup of yogurt in his smoothies. How many cups of yogurt are used for 1 cup of kale? Show your work to find this unit rate.

$\frac{3}{4}$ cup yogurt $\div \frac{1}{2}$ cup kale = $\boxed{1\frac{1}{2} \text{ cups yogurt per cup of kale}}$

OR

$$\frac{\frac{1}{2} \text{ cup kale}}{\frac{3}{4} \text{ cup yogurt}} \xrightarrow{\cdot 2} = \frac{1 \text{ cup kale}}{x \text{ cup yogurt}}$$

$x = \frac{3}{4} \cdot 2 = \boxed{1\frac{1}{2} \text{ cups yogurt per cup of kale}}$

7.RP.2 Decide whether two quantities are in a proportional relationship by testing for equivalent ratios in a table or by graphing and observing if it is a straight line through the origin. Identify the constant of proportionality (unit rate) in tables, graphs, equations, and descriptions. Represent proportional relationships by equations. Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, r) where r is the unit rate. [2, 3]

2. **Below are two tables of values.**
   a. Circle the table below that shows a proportional relationship.

x	0	3	6	9
y	0	9	36	81

 | x | 0 | 2 | 4 | 6 |
   |---|---|---|---|---|
   | y | 0 | 3 | 6 | 9 |

   b. In the table you circled above, what is the constant of proportionality? __1.5__

   c. Use your answer in part (b) to write an equation for the table you circled.

   $$y = 1.5x$$

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3. The graph below shows a proportional relationship.

Family Road Trip

Number of Miles vs Number of Hours
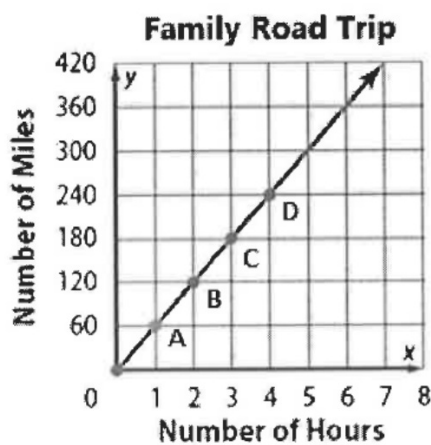
a. What does the point (4, 240) represent in the context of the situation?

   In 4 hours, the family has traveled 240 miles.

b. What is the constant of proportionality? __60__

c. Write an equation to find the number of miles, m, for any number of hours, h.

   $m = 60h$