

Lesson 10: Interpreting Graphs of Proportional Relationships

Classwork

Example 1

Grandma’s Special Chocolate Chip Cookie recipe, which yields 4 dozen cookies, calls for 3 cups of flour.

Using this information, complete the chart:

<p>Create a table comparing the amount of flour used to the amount of cookies.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Cups of flour</th> <th>Dozens of cookies</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>4</td> </tr> <tr> <td>6</td> <td>8</td> </tr> <tr> <td>9</td> <td>12</td> </tr> </tbody> </table>	Cups of flour	Dozens of cookies	3	4	6	8	9	12	<p>Is the number of cookies proportional to the amount of flour used? Explain why or why not.</p> <p>yes, they all have the same rate</p> <p>$\frac{4}{3}$ or $1\frac{1}{3}$</p>	<p>What is the unit rate of cookies to flour ($\frac{y}{x}$) and what is the meaning in the context of the problem?</p> <p>$k = \frac{4}{3} = \frac{4}{3}$ or $1\frac{1}{3}$</p> <p>$1\frac{1}{3}$ dozen of cookies for 1 cup of flour</p> <p>(16 cookies)</p>
Cups of flour	Dozens of cookies									
3	4									
6	8									
9	12									
<p>Model the relationship on a graph.</p>	<p>Does the graph show the two quantities being proportional to each other? Explain</p> <p>Yes, the graph is in a straight line and goes through the origin</p>	<p>Write an equation that can be used to represent the relationship.</p> <p>$D = \frac{4}{3}f$</p> <p>or</p> <p>$D = 1\frac{1}{3}f$</p> <p>or</p> <p>$D = 1.3\bar{3}f$</p>								

$2 + 4 = 16$ Cook
 $1 = \frac{1}{3}$