Grade 3 Mathematics:  Oatmeal Cookies
You are helping your grandma bake oatmeal cookies. She is planning on using the recipe below. The only problem is that your grandma is missing most of her measuring cups. She only has a $\frac{1}{8}$ measuring cup, a $\frac{1}{4}$ measuring cup and a $\frac{1}{6}$ measuring cup. You need to help her figure out how to measure out the ingredients. Use what you know about equivalent fractions to help you. Remember that baking requires precise measurements.

Oatmeal Cookie Recipe

1 stick of butter

2 eggs

2 cups of oats

$\frac{3}{8}$ cup of chocolate chips

$\frac{2}{3}$ cup sugar

1 cup of flour

$\frac{1}{2}$ cup brown sugar
1. Complete the table to show one way to measure out each of the following ingredients. Grandma only has \( \frac{1}{8} \), \( \frac{1}{4} \), and \( \frac{1}{6} \) measuring cups.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Which size cup will you use? Write the UNIT FRACTION ( \frac{1}{8}, \frac{1}{4}, \text{ or } \frac{1}{6} )</th>
<th>Use symbols or a visual model with labels to show how the fractions are equivalent.</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \frac{1}{2} ) cup brown sugar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \frac{2}{3} ) cup sugar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 cup flour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 cups oats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \frac{3}{8} ) cup chocolate chips</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. Using the cups that she has, which are $\frac{1}{8}$, $\frac{1}{4}$, and $\frac{1}{6}$, Grandma says that there is more than one way to measure out the 1 cup of flour.

Is she correct? ________________

Use pictures, numbers and/or words to explain your thinking.

Explain or show any patterns you notice.
3. Bobby really likes chocolate, so he wants to have more chocolate chips in the recipe. Which amount of chocolate chips do you think he should choose, \( \frac{3}{8} \) or \( \frac{3}{4} \) of a cup?

Compare the fractions using (>, <, =).

\[
\frac{3}{8} \quad \text{or} \quad \frac{3}{4}
\]

Use pictures, numbers and/or words to explain your thinking.
4a. Your friend Bobby wants to make Grandma’s recipe. Unfortunately, he only has a \( \frac{1}{3} \) measuring cup.

Complete the chart to tell whether or not Bobby can measure each of the ingredients using his \( \frac{1}{3} \) measuring cup.

<table>
<thead>
<tr>
<th>Ingredient from the Recipe</th>
<th>Can Bobby do this? (yes or no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \frac{1}{2} ) cup brown sugar</td>
<td></td>
</tr>
<tr>
<td>( \frac{2}{3} ) cup sugar</td>
<td></td>
</tr>
<tr>
<td>1 cup flour</td>
<td></td>
</tr>
<tr>
<td>2 cups of oats</td>
<td></td>
</tr>
<tr>
<td>( \frac{3}{8} ) cup of chocolate chips</td>
<td></td>
</tr>
</tbody>
</table>
4b. Look back in the table in part 4a and choose one ingredient that Bobby cannot measure accurately using only his $\frac{1}{3}$ measuring cup.

Ingredient: ________________________

Use pictures and/or numbers to explain your thinking.

Explain your thinking using words.

____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________
5. You would like to start baking at home on your own. You are interested in baking many different types of recipes and want to be well-prepared with your measuring tools. You go to the store to buy some baking supplies. When you get to the store, you realize **you do not have enough money to buy all four measuring cups**.

Which cups would you choose? \[
\frac{1}{8} \quad \frac{1}{4} \quad \frac{1}{3} \quad \frac{1}{2}
\]

Use pictures and/or numbers to explain your thinking.

____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________

Explain your thinking using words.

____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________