Assignment: Scaling Up Fractions and Mixed Numbers in Your World

Choose two of the three real-world applications of fractions and mixed numbers. Show all your work, including the change from fractions and mixed numbers to improper fractions (when needed) and back. Show your calculations and explain how you scaled up the amounts.

Then, write your own story problem using mixed numbers that need to be scaled up. The problem should have at least five mixed numbers that will be scaled up. Be sure to show all your work, explain your steps in your solution (including changing improper fractions to mixed numbers), and write a complete answer to your problem. Your answer should include units for the mixed numbers, if needed.

Choice 1: *Scaling Up a Recipe*

This recipe makes three dozen cookies. You want to make enough cookies so that 360 people each get two cookies. How will you scale up the recipe? How much of each ingredient will you need?

$1\dfrac{1}{16}$ cups of butter

$\dfrac{5}{8}$ cup of white sugar

$1\dfrac{3}{4}$ teaspoons of vanilla extract

$1\dfrac{7}{8}$ cups of all-purpose flour

$\dfrac{5}{6}$ cup of chopped almonds

$\dfrac{7}{12}$ cup of confectioner's sugar

Choice 2: *Scaling Up Fabric Amounts*

This fabric list makes one Crazy Quilt. But you and a group of your friends are doing a service project and want to make 300 quilts. How much of each type of fabric will you need?

$5\dfrac{3}{16}$ yards of red silk

$4\dfrac{7}{8}$ yards of blue denim

$6\dfrac{1}{8}$ yards of yellow satin

$3\dfrac{3}{4}$ yards of green cotton blend

$4\dfrac{5}{16}$ yards of purple felt

Choice 3: *Scaling Up*

These are the round-trip distances that city buses traveled on different routes each month. Calculate the total distance, in miles, that buses travel each route in one year.

$250\frac{3}{5}$ miles to Parkville

$346\frac{3}{10}$ miles to Green City

$134\frac{1}{5}$ miles to Evergreen Town

$327\frac{4}{5}$ miles to Jefferson

$413\frac{7}{10}$ miles to Clinton City

Solve Your Own Problem:

Write your own story problem using mixed numbers that need to be scaled up. The problem should have at least five mixed numbers that will be scaled up. Be sure to show all your work, explain your steps in your solution (including changing improper fractions to mixed numbers), and write a complete answer to your problem. Your answer should include units for the mixed numbers, if needed.