

Math and Drop Bag Numbers--Sixth Grade

Common Core Standards are listed first. The activities follow, in italics.

Common Core Standards:

Ratios and Proportional Relationships 6.RP

Understand ratio concepts and use ratio reasoning to solve problems.

1. Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. *For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."*
2. Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. *For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is $3/4$ cup of flour for each cup of sugar." "We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger."*

The Number System 6.NS

Apply and extend previous understandings of multiplication and division to divide fractions by fractions

1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, create a story context for $(2/3) \div (3/4)$ and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that $(2/3) \div (3/4) = 8/9$ because $3/4$ of $8/9$ is $2/3$. (In general, $(a/b) \div (c/d) = ad/bc$.) How much chocolate will each person get if 3 people share $1/2$ lb of chocolate equally? How many $3/4$ -cup servings are in $2/3$ of a cup of yogurt? How wide is a rectangular strip of land with length $3/4$ mi and area $1/2$ square mi?*

Compute fluently with multi-digit numbers and find common factors and multiples.

2. Fluently divide multi-digit numbers using the standard algorithm.
3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.

Students read the post and record the numbers, classifying them into these categories: food for dogs, food/drink for Jodi, gear for dogs, gear/clothing for Jodi, bags for packing food in. Create an Excel sheet showing these items.

Write a ration for the number of poly bags and the number of freezer bags. Use 150 for the freezer bags number, since there are 2 numbers given. Write a sentence describing this ratio.

Write a ratio for the amount of meat and the amount of beef fat for the dogs. Write a sentence which describes this ratio.

Write a ratio to show the amount of massage oil for the dogs and foot cream for them. Write a sentence describing the ratio.

One pack of booties = 4 booties. Jodi packed 25 sets of booties, 18 packs in a set, to find the total number of booties Jodi packed. Calculate the answer 2 ways. $(4 \times 18) \times 25 = \underline{\hspace{2cm}}$
 $(4 \times 25) \times 18 = \underline{\hspace{2cm}}$ Is one way easier to calculate than the other? Why?

Find the total of individual gloves and socks for Jodi TWO different ways. (Add all three amounts and multiply by 2. $2 \times (80 + 12 + 8) = \underline{\hspace{2cm}}$ Multiply each number by 2 and add the 3 answers. $(2 \times 80) + (2 \times 12) + (2 \times 8) = \underline{\hspace{2cm}}$)

Chocolate Muffin Recipe from allrecipes.com 2.25.2015

2 cups all-purpose flour 1 cup white sugar 3/4 cups chocolate chips 1/2 cup unsweetened cocoa powder 1 teaspoon baking soda 1 teaspoon vanilla extract 1 egg 1 cup plain yogurt 1/2 cup milk 1/2 cup vegetable oil 1/4 cup chocolate chips

1. Preheat oven to 400 degrees F (200 degrees C). Grease 12 muffin cups or line with paper muffin liners.
2. Combine flour, sugar, 3/4 cup chocolate chips, cocoa powder, and baking soda in a large bowl. Whisk egg, yogurt, milk, and vegetable oil in another bowl until smooth; pour into chocolate mixture and stir until batter is just blended. Fill prepared muffin cups 3/4 full and sprinkle with remaining 1/4 cup chocolate chips.
3. Bake in preheated oven until a toothpick inserted into the center comes out clean, about 20 minutes. Cool in the pans for 10 minutes before removing to cool completely on a wire rack.

Write the amounts of each ingredient you would need to double this recipe.

Just for fun, add together all the ingredients measured in cups. Use the amounts needed to make 12 muffins. Then, do it again, but convert the fractions to decimals, then add.