

Name \_\_\_\_\_

Date \_\_\_\_\_

## Associated Ratios and the Value of a Ratio

Alyssa's extended family is staying at the lake house this weekend for a family reunion. She is in charge of making homemade pancakes for the entire group. The pancake mix requires 2 cups of flour for every 10 pancakes.

1. Write a ratio to show the relationship between the number of cups of flour and the number of pancakes made.
2. Determine the value of the ratio.
3. Use the value of the ratio to fill in the following two multiplicative comparison statements.
  - a. The number of pancakes made is \_\_\_\_\_ times the amount of cups of flour needed.
  - b. The amount of cups of flour needed is \_\_\_\_\_ of the number of pancakes made.
4. If Alyssa has to make 70 pancakes, how many cups of flour will she have to use?

1. Maritza is baking cookies to bring to school and share with her friends on her birthday. The recipe requires 3 eggs for every 2 cups of sugar. To have enough cookies for all of her friends, Maritza determined she would need 12 eggs. If her mom bought 6 cups of sugar, does Maritza have enough sugar to make the cookies? Why or why not?
2. Hamza bought 8 gallons of brown paint to paint his kitchen and dining room. Unfortunately, when Hamza started painting, he thought the paint was too dark for his house, so he wanted to make it lighter. The store manager would not let Hamza return the paint but did inform him that if he used  $\frac{1}{4}$  of a gallon of white paint mixed with 2 gallons of brown paint, he would get the shade of brown he desired. If Hamza decided to take this approach, how many gallons of white paint would Hamza have to buy to lighten the 8 gallons of brown paint?

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1. Write a ratio to show the relationship between the number of cups of flour and the number of pancakes made.

**2: 10**

2. Determine the value of the ratio.

$$\frac{2}{10} = \frac{1}{5}$$

3. Use the value of the ratio to make a multiplicative comparison statement.
  - a. The number of pancakes made is 5 times the number of cups of flour needed.
  - b. The number of cups of flour needed is  $\frac{1}{5}$  of the number of pancakes made.
4. If Alyssa has to make 70 pancakes, how many cups of flour will she have to use?

*Alyssa will have to use 14 cups of flour.*

1. Maritza is baking cookies to bring to school and share with her friends on her birthday. The recipe requires 3 eggs for every 2 cups of sugar. To have enough cookies for all of her friends, Maritza determined she would need 12 eggs. If her mom bought 6 cups of sugar, does Maritza have enough sugar to make the cookies? Why or why not?

*Maritza will NOT have enough sugar to make all the cookies because she needs 8 cups of sugar and only has 6 cups of sugar.*

2. Hamza bought 8 gallons of brown paint to paint his kitchen and dining room. Unfortunately, when Hamza started painting, he thought the paint was too dark for his house, so he wanted to make it lighter. The store manager would not let Hamza return the paint but did inform him that if he used  $\frac{1}{4}$  of a gallon of white paint mixed with 2 gallons of brown paint, he would get the shade of brown he desired. If Hamza decided to take this approach, how many gallons of white paint would Hamza have to buy to lighten the 8 gallons of brown paint?

*Hamza would need 1 gallon of white paint to make the shade of brown he desires.*