

Objective Using Tables to Represent Ratios

Warm-Up



It takes 1 cup of milk to make a batch of 8 pancakes.

1. How many cups of milk does it take to make 4 pancakes?

2. How many pancakes can be made with 8 cups of milk?



Remember, the school colors at Riverview Middle School are a shade of bluish green and white. The art teacher, Mr. Raith, needs to mix different quantities of the green paint for several school projects.

It takes 3 parts blue paint to 2 parts yellow paint to create the bluish green color. Carla needs 5 total pints of the bluish green paint, so she used 3 pints of blue paint and 2 pints of yellow paint.

Mr. Raith thought that the art students needed a table to help determine the correct amount of each color of paint for different projects—both large and small.

1. Complete the table with the correct amounts.
Explain your reasoning.

Amount of Bluish Green Paint Needed	5 pints	15 pints			
Yellow Paint	2 pints		8 pints		
Blue Paint	3 pints		12 pints	18 pints	1.5 pints

2. Examine Sally's answer. Explain what is wrong with her thinking.

Sally



If I want 15 pints of bluish green paint, then I will need to add 10 to the original 5 total parts of bluish green to get 15. So, I should add 10 to each of the other numbers too to get 12 pints of yellow and 13 pints of blue.

Charlie said, "The table is helpful, but it cannot list every amount we might need for every painting project. I think if we multiply $\frac{2}{5}$ times the total amount of bluish green paint we need, we can determine the amount of yellow paint needed. If we multiply $\frac{3}{5}$ times the total amount of bluish green paint we need, we can determine the amount of blue paint needed."

3. What do you think about Charlie's method? Is he correct or incorrect? Explain your reasoning.

Charlene said, "I am thinking about this in a different way. The amount of blue paint is always $1\frac{1}{2}$ times as much as the amount of yellow paint."

4. Is she correct in her thinking? Explain your reasoning.

Clifford said, "My thinking is related to Charlene's. The yellow paint is $\frac{2}{3}$ of the blue paint."

5. Is Clifford correct? Explain your reasoning.

6. How does Clifford's thinking relate to Charlene's thinking?

Show You Know

Lollipop Recipe

Consider the recipe for making one batch of lollipops.

2 cups granulated sugar

$\frac{2}{3}$ cup light corn syrup

$\frac{3}{4}$ cup water

$\frac{1}{4}$ teaspoon flavoring oil

1. The table represents the ratio of ingredients used to make lollipops. Complete the ratio table. Explain your calculations.

Number of Batches	1	2	5	10
Sugar (c)				
Corn syrup (c)				
Water (c)				
Flavoring Oil (tsp)				

2. For each number of batches, describe how you can use addition to determine the amount of each ingredient needed.

a. 3 batches

b. 7 batches

3. For each number of batches, describe how you can use subtraction to determine the amount of each ingredient needed.

a. 3 batches

b. 7 batches



LESSON 4.4b

A Trip to the Moon



Objective Using Tables to Represent Ratios

Practice

Each table represents the ratio of yellow daffodils to white daffodils for different garden displays.

Complete each ratio table. Explain your calculations.

1.

Yellow daffodils	9	36	45	
White daffodils	15			90

2.

Yellow daffodils	7		28	
White daffodils	6	12		42

3.

Yellow daffodils	32			16
White daffodils		48	6	12

4.

Yellow daffodils	5	1		9
White daffodils		3	30	

5.

Yellow daffodils		105	84	21
White daffodils	20	60		

6.

Yellow daffodils	55	22	77	
White daffodils	25	10		5

