NAME:

Purpose

To understand and make equal ratios

Math Words

equal ratios	The ratio 2 to 3 is equal to the ratio 4 to 6. $2:3 = 4:6$ $\dfrac{2}{3} = \dfrac{4}{6}$
scale factor	The scale factor 3 means you have 3 times as much.
terms of the ratio	If you multiply both terms of the ratio 2:6 by the scale factor 5, you get an equal ratio of 10:30.

Starter Problem

Kyle painted a room at the community center with a mixture of 6 quarts of red paint to 8 quarts of white. Suppose he wants to paint a larger room or a smaller room the same color. What are two other equal ratios of paint that he could use?
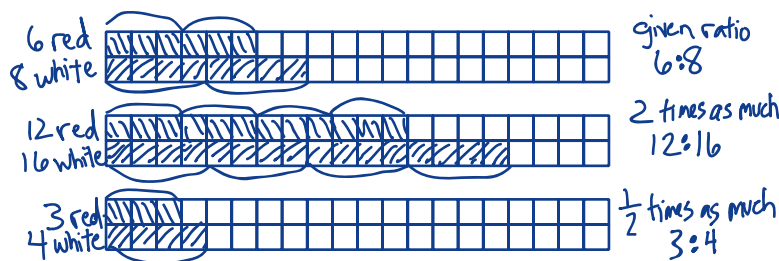
NAME:

Starter Problem

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Student Thinking

Erica

If he uses twice as much red and white, it's 12 red to 16 white. If he uses half as much red and white, it's 3 red to 4 white. They're all 3 red for every 4 white.

OK

6 red
8 white

given ratio
6:8

12 red
16 white

2 times as much
12:16

3 red
4 white

½ times as much
3:4

Justin

He can add or subtract the same amount of each color to get an equal ratio. If he adds 2 quarts of red and 2 quarts of white, the ratio is 8:10. Or, if he uses 4 less of each color, the ratio is 2:4.

Pitfall

| RED | 6 | 8 | 2 |
| WHITE | 8 | 10 | 4 |

Things to Remember

✳ ....
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✳ ....
....

STOP

NAME:

Our Turn

Solve. Write each answer in the blank. Be ready to explain or show how you know the ratios are equal.

1.   Seed packets come with 25 yellow sunflower seeds for every 10 orange sunflower seeds. Write and label an equal ratio for a packet of sunflower seeds with 3 times as many seeds.

   _____

2.   A recipe for chili calls for 2 cans of red beans and 3 cans of pinto beans. Write and label an equal ratio to describe $\frac{1}{2}$ of the recipe of chili.

   _____

3.   You can buy cheese snacks on sale for 6 packs for $4. Write an equal ratio to describe the cost of 9 packs.

   _____

NAME:

My Turn

Solve. Write each answer in the blank. Be ready to explain or show how you know the ratios are equal.

1. A recipe for energy bars calls for 9 ounces of nuts and 24 ounces of chocolate chips. Write and label an equal ratio for a batch of energy bars that is 3 times as much.

   _____

2. Mr. Jung received $5 for recycling 8 pounds of aluminum. Write and label an equal ratio for recycling 2.5 times as much aluminum.

   _____

3. A recipe for baking mix calls for 8 cups of whole-wheat flour and 3 cups of oat bran. Joel wants to make a half recipe. Write and label an equal ratio to describe the whole-wheat flour and oat bran in $\frac{1}{2}$ of a recipe of baking mix.

   _____

NAME:

Multiple Choice Mini Lesson

Fill in the circle next to the answer you choose.

1. Fruit bars are sold at a rate of 12 for $8. Which of the following ratios is an equal ratio comparing the number of fruit bars to their cost?

   ○ 2:3   ○ 4:6   ○ 20:16   ○ 24:16

2. A recipe for orange punch calls for 2 cans of orange juice and 3 bottles of sparkling water. Which of the following ratios describes the number of cans and bottles to use for a smaller batch of orange punch?

   ○ 4:6   ○ 1:1.5   ○ $\frac{1}{2} : \frac{1}{3}$ ○ not given

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NAME:

Writing Task Mini Lesson

Explain why mixing 6 spoonfuls of chocolate powder with 8 ounces of milk is the same ratio as mixing $1\frac{1}{2}$ spoonfuls of chocolate powder with 2 ounces of milk. Would they taste the same? You may make a drawing to help you explain.

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