Ratios & Batches

Ratios & Rates • Answer Key

ANSWER KEY • Amplify Alignment: Grade 6 Accelerated, Unit 2, Lesson 2

Three recipes for orange paint



Each drop shown = 1 drop of food coloring.

1. Use the diagrams to complete each pair of statements.

a Recipe A uses **3** drops of red and **2** drops of yellow. The ratio of red to yellow in Recipe A is **3 : 2**.

b Recipe B uses **6** drops of red and **4** drops of yellow. The ratio of red to yellow in Recipe B is **6 : 4**.

c Recipe C uses **3** drops of red and **4** drops of yellow. The ratio of red to yellow in Recipe C is **3 : 4**.

2. Which statement is true about the recipes?

(A) The quantities in Recipe B are double those of Recipe A.

B The quantities in Recipe C are double those of Recipe A.

C The quantities in Recipe A are double those of Recipe B.

D The quantities in Recipe B are double those of Recipe C.

3. Adding more yellow makes the orange paint lighter. Which recipe makes the lightest shade of orange? Explain your thinking.

Recipe C. Recipes A and B make the same shade because B is a double batch of A (3 : 2). Recipe C uses the same 3 drops of red as A but has 4 drops of yellow instead of 2, so it has more yellow for every drop of red.

4. What could be added to Recipe A so that its color matches Recipe C?

Add 2 more drops of yellow. Then Recipe A would have 3 red and 4 yellow, just like Recipe C.

5. One batch of trail mix uses 2 parts pretzels, 3 parts cereal, and 1 part raisins. How many batches are shown in the diagram? Explain your thinking.

Pretzels 

Cereal 

Raisins 

3 batches. 6 = 3 × 2, 9 = 3 × 3, and 3 = 3 × 1.

6. A granola bar recipe mixes 3 cups of oats with 1 cup of honey.

a Draw a diagram that represents **doubling** the recipe.

Oats (cups) 

Honey (cups) 

b Draw a diagram that represents **tripling** the recipe.

Oats (cups) 

Honey (cups) 

7. In a fruit punch recipe, the ratio of cups of juice to cups of ginger ale is 3 : 2.

a Write the ratio of juice to ginger ale for a **double** batch. **6 : 4**

b Write the ratio of juice to ginger ale for a **triple** batch. **9 : 6**

8. To fill one bird feeder, Sam mixes 2 cups of sunflower seeds with 1 cup of millet.

a Sam has 4 bird feeders. What is the ratio of cups of sunflower seeds to cups of millet he needs to fill all 4? **8 : 4**

b Sam says that to fill 3 feeders he needs 6 cups of sunflower seeds and 2 cups of millet. Is Sam correct? Explain your thinking.

No. Three feeders need 3 batches: 3 × 2 = 6 cups of sunflower seeds and 3 × 1 = 3 cups of millet, not 2.