

## Dear Family,

Your child is learning about ratios.



You use a ratio when you compare two different quantities. For example, you might use a ratio when you describe the quantities needed to make a batch of granola. If you use 2 cups of almonds and 7 cups of oats, you could describe the quantities in the following ways.

- The ratio of almonds to oats is 2 to 7.
- The ratio of oats to almonds is 7 to 2.
- The ratio of almonds to the entire batch of granola is 2 to 9.

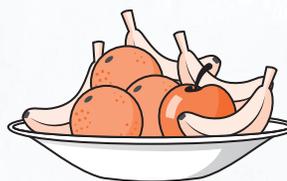
You can think of a ratio as comparing two quantities. Sometimes ratios compare parts, and sometimes they compare parts and wholes.

- When you compare the quantity of almonds to oats or the quantity of oats to almonds, you compare parts to each other.
- When you compare the quantity of almonds to the entire batch of granola, you compare one part to the whole.

A ratio can be written with words, with a colon, or as a fraction: 2 to 7, 2 : 7, or  $\frac{2}{7}$ .

**Consider the following example:**

A recipe for fruit salad calls for 1 apple, 3 oranges, and 4 bananas. How can you use a ratio to compare the quantities of oranges to bananas and to compare the quantity of oranges to the total amount of fruit in the salad?



The next page shows two different ways in which your child might write ratios to compare the quantities of fruit.



## Ratios: Sample Solution

A recipe for fruit salad calls for 1 apple, 3 oranges, and 4 bananas. How can you use a ratio to compare the quantities of oranges to bananas and to compare the quantity of oranges to the total amount of fruit in the salad?

To compare the quantities of fruit, think about the parts and the whole. Each quantity of apples, oranges, and bananas is a part. All the fruit together makes up the whole.

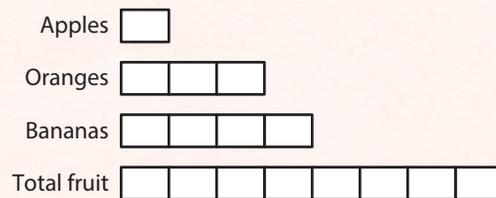
**One way:** Use a picture to represent the quantities.



The ratio of oranges to bananas is: 3 to 4,  $3 : 4$ , or  $\frac{3}{4}$ .

The ratio of oranges to the total amount of fruit is: 3 to 8,  $3 : 8$ , or  $\frac{3}{8}$ .

**Another way:** Use a tape diagram to show how the quantities of each kind of fruit compare to each other and to the whole.



The ratio of oranges to bananas is 3 to 4,  $3 : 4$ , or  $\frac{3}{4}$ .

The ratio of oranges to the total amount of fruit is 3 to 8,  $3 : 8$ , or  $\frac{3}{8}$ .

**Answer:** Both methods show that the ratio of oranges to bananas is 3 to 4,  $3 : 4$ , or  $\frac{3}{4}$ , meaning that there are 3 oranges for every 4 bananas.

Both methods also show that the ratio of oranges to the total amount of fruit is 3 to 8,  $3 : 8$ , or  $\frac{3}{8}$ , meaning that there are 3 oranges for every 8 pieces of fruit in the salad.