Dear Family,

Your child is learning about unit rates.

Rates and unit rates are often used in everyday life. Some examples that you are probably familiar with are miles per hour, price per pound, and earnings per hour. You might use rates and unit rates when you are grocery shopping, traveling, or figuring out payments to a babysitter.

Rates and unit rates are related to ratios. A ratio compares two quantities, such as 6 cups of flour to 3 cups of sugar in a recipe. A rate compares the first quantity to just *one* of the second quantity. In the recipe example, the rate of flour to sugar is 2 cups of flour to 1 cup of sugar. The unit rate comparing flour to sugar is 2 because that is the number in the rate that is compared to 1.

Consider the following example:

A train travels 360 miles in 6 hours. The train makes no stops and travels at the same speed for the entire time. How could you use the ratio of miles to hours to find the related rate and unit rate to describe how fast the train traveled?

On the next page you will see two ways your child may find a rate and a unit rate.

Vocabulary

ratio a way to compare two different quantities.

rate an equivalent ratio that compares the first quantity in a ratio to only one of the second quantity.

unit rate the number in a rate that is being compared to 1.

NEXT

Understand Unit Rate: Sample Solution

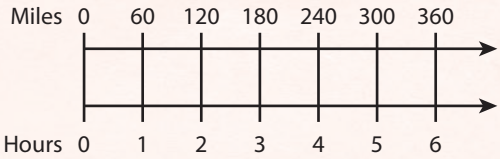
A train went 360 miles in 6 hours. The train makes no stops and travels at the same speed for the entire time. Use the ratio of miles to hours to find a related rate and unit rate that describe how fast the train traveled.

One way:

- Write the ratio of miles to hours as a fraction. $\frac{360}{6}$
- Write an equivalent fraction with a denominator of 1 to find the rate. $\frac{60}{1}$
- The unit rate is the number in a rate that is compared to 1. 60

Another way:

Use a double number line to find the rate and unit rate.



- Show *miles* on the top number line and *hours* on the bottom number line.
- Label the number of miles traveled, 360, and the number of hours spent traveling, 6.
- Since there are 6 hours of travel time, break up the distance of 360 miles into 6 equal parts, too.
- Find the number of miles traveled in 1 hour.

Answer: Both methods show that the ratio of $\frac{360}{60}$ has a related rate of $\frac{60}{1}$ and a unit rate of 60. This means that the train traveled at a rate of 60 miles per hour and that the unit rate, or the number of miles traveled in 1 hour, is 60.