



Lesson: Exchange Rates

Sixth Grade Objective: 5.04 Use graph, tables, and symbols to model and solve problems involving rates of change and ratios.

Lesson

Ratios tell how one number is related to another number.

A ratio may be written in three different ways:

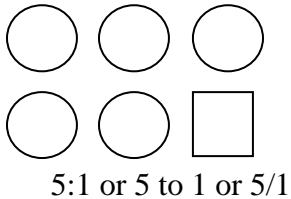
- Using a colon 1:3
- As a fraction 1/3
- Using the word “to” 1 to 3

Important Tips to Remember:

- Always be sure to write any ratio in simplest form.
- Make sure to write the ratio in the order given.

Example 1:

The ratio of circles to squares would be:



A ratio of 5:1 says that the first number is five times as large as the second. Using this ratio, how many circles would there be if you had 6 squares?

A ratio written as a fraction can help you solve the problem. You need to find the equivalent fraction of 5/1 with the denominator of 6 (the number of square).

$$\frac{\text{circles}}{\text{squares}} = \frac{5}{1} = \frac{?}{6} \quad ? = \text{the number of circles when there are 6 squares}$$

? = **30 circles**

This example is easy to visualize and very straight forward. Now we will use ratios in a more practical way.

Exchange Rates

If you were to travel to a different country you would need to purchase, or exchange your United States currency for the currency of the country you are visiting. An exchange rate is simply a ratio.

For example if 1 us dollar is equal to 6.5 Mexican pesos the exchange rate can be written as a ration: 1:6.5 or $\frac{1}{6.5}$ of 1 to 6.5.

If you wanted to exchange \$20 for pesos, how many pesos should you get?

By writing the ratio as a fraction and finding the equivalent fraction, or ratio you can find the missing information.

$$\begin{array}{l} \text{US dollars} \\ \text{Mexican Pesos} \end{array} \quad \frac{1}{6.5} = \frac{20}{x} \quad x = \text{the number of Mexican Pesos}$$
$$\frac{1}{6.5} = \frac{20}{x} \quad x = (20) \mathbf{130}$$

You should receive 130 Mexican pesos.

Try these on your own!



Use the following exchange rates to solve these problems.

\$1 US dollar = 6.5 Mexican pesos
\$1 US dollar = £0.5 British pounds
\$1 US dollar = €1.5 Euros

1. You are on a vacation to Mexico. In Cancun you find a pair of shoes you really like. The cost is 156 Pesos. How much do the shoes cost in US dollars?
2. The Euro is the currency of most of Europe. The **euro** (currency sign: €) is the official currency of the European Union (EU), used in 15 member states, known collectively as the Eurozone (Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovenia, Spain). It is also used in 9 other countries around the world, 7 of those being in Europe.
You are taking a trip to Europe. How many euros will you get for \$500?

3. The currency of the United Kingdom is the British Pound (£). The U.K. is one of a few countries in Europe that does NOT use the euro. The Smith family took a trip to London. To take a taxi from their hotel to the Buckingham Palace is £12. How many US dollars did they spend to take the taxi?

Check your answers

1. US Dollars $\frac{1}{6.5} = \frac{?}{156}$
 Mexican Pesos

$\frac{1}{6.5} = \frac{24}{156}$

The shoes cost \$24.

2. US Dollars $\frac{1}{1.5} = \frac{500}{?}$
 Euros

$\frac{1}{1.5} = \frac{500}{750}$

You will get €750.

3. US dollars $\frac{1}{0.5} = \frac{?}{12}$
 British Pounds

$\frac{1}{0.5} = \frac{24}{12}$

The taxi will cost \$24.

Quiz Yourself

1. You are going to Mexico and you want to make a chart showing the exchange rate between pesos and US dollars. That way you can refer to it when you are buying something. The exchange rate is 6.5 pesos to 1 dollar.

Dollars	10	20	30	40	50	60
Pesos						

2. Using the exchange rate, 1 US dollar = 0.5 British pounds, how many pounds would you receive for \$250?
3. An exchange student from France is coming to the United States to study at your school. He wants to exchange €600 (Euros) for dollars. How many dollars should he receive? Use the exchange rate 1US dollar = 1.5 Euros.

Check Your Answers

1.

Dollars	10	20	30	40	50	60
Pesos	65	130	195	260	325	390

$$\begin{array}{l} 2. \text{ US dollars} \\ \text{British Pounds} \end{array} \quad \frac{1}{0.5} = \frac{250}{?}$$

$$\frac{1}{0.5} = \frac{250}{125}$$

You would receive £125.

$$3. \text{ US dollars} \quad \frac{1}{1.5} = \frac{?}{600}$$

$$\frac{1}{1.5} = \frac{400}{600}$$

He should receive \$400