

LESSON 2

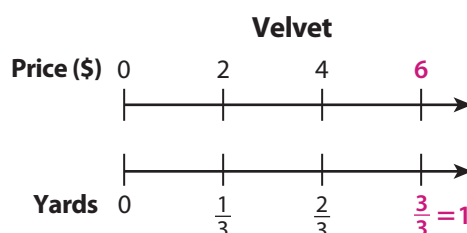
Dear Family,

This week your student is learning how to find unit rates for ratios when at least one of the quantities is a fraction.

Your student is also learning how to interpret complex fractions. A **complex fraction** is a fraction that has another fraction in the numerator, the denominator, or both. For example, $\frac{\frac{2}{3}}{8}$ is a complex fraction. You can read this as $\frac{2}{3}$ over 8. Your student will be solving problems with ratios of fractions like the one below.

Malcolm is making a costume. He wants to buy red fabric. Red sequin fabric costs \$14 for 2 yards and red velvet fabric costs \$2 for $\frac{1}{3}$ yard. Which fabric is less expensive?

► **ONE WAY** to find a unit rate is to use a double number line.



► **ANOTHER WAY** is to use division.

Sequin Fabric

Cost in dollars per yard is $\frac{14}{2}$.

$$\frac{14}{2} = 14 \div 2$$

$$= 7$$

Velvet Fabric

Cost in dollars per yard is $\frac{2}{\frac{1}{3}}$.

$$\frac{2}{\frac{1}{3}} = 2 \div \frac{1}{3}$$

$$= 2 \cdot 3$$

$$= 6$$

Both ways show that the sequin fabric costs \$7 per yard and the velvet fabric costs \$6 per yard. So, the velvet fabric is less expensive!



Use the next page to start a conversation about ratios of fractions.

Explore Unit Rates for Ratios with Fractions

Previously, you learned about unit rates. In this lesson, you will learn about unit rates for ratios with fractions.

► Use what you know to try to solve the problem below.

Grace weaves a rug that is $\frac{1}{3}$ yard wide and 2 yards long. She wants to weave a rug that uses the same design but is 1 yard wide. How long will the rug be?



TRY
IT



Math Toolkit double number lines, fraction bars, fraction tiles, grid paper

DISCUSS IT

Ask: What did you do first to find the length?

Share: I knew . . . so I . . .



Learning Target SMP 1, SMP 2, SMP 3, SMP 4, SMP 5, SMP 6, SMP 7

Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.