Assignment

LESSON 2: Eggzactly!

Write

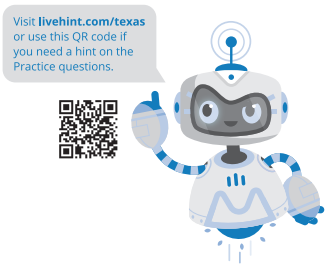
Write a definition for *complex ratio*, provide an example, and show how your example can be converted into a unit rate.

Remember

To convert a complex rate to a unit rate, you can multiply the numerator and denominator by the reciprocal of the denominator, or you can use the definition of division.

$$\frac{\frac{1}{2}}{\frac{1}{4}} \times \frac{\frac{4}{1}}{\frac{4}{1}} = \frac{\frac{4}{2}}{1} = 2 \qquad \frac{\frac{1}{2}}{\frac{1}{4}} = \frac{1}{2} \div \frac{1}{4} = \frac{1}{2} \cdot 4 = 2$$

Practice

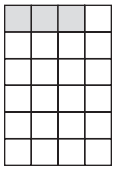


1. The table shows the gallons filled in a pool over time.

Number of Hours	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{2}$	$2\frac{1}{2}$
Gallons Filled		$637\frac{1}{2}$		

   a. Complete the table.
   b. Determine a unit rate for this situation.
   c. Use a unit rate to calculate the gallons filled in 5.5 hours.
   d. Use a unit rate to determine about how many minutes it will take to fill 100 gallons in the pool.

2. The rectangle shown is composed of smaller equally-sized squares. The shaded section has an area of $\frac{3}{16}$ square inches. Use a unit rate to determine the area of the larger rectangle.



Read each situation and answer each question.

3. Keisha took a 5-mile walk at the park on Saturday. How many kilometers did Keisha walk? Show your work.
4. Mr. Johnson pumped 12 gallons of gas into his car. How many liters of gas would that be? Show your work.
5. What is your height in centimeters? Show your work.
6. Use $>$, $<$, or $=$ to make each statement correct.
   a. 2 in. _____ 4 cm
   b. 2 kg _____ 4.4 lb
   c. 3 qt _____ 3 L
   d. 6 km _____ 3 mi
7. The school cafeteria has eight very large cans of tomato sauce for making pizza. Each can contains 2 gallons of sauce. Is there more or less than 50 L of sauce in these cans? Explain your reasoning.

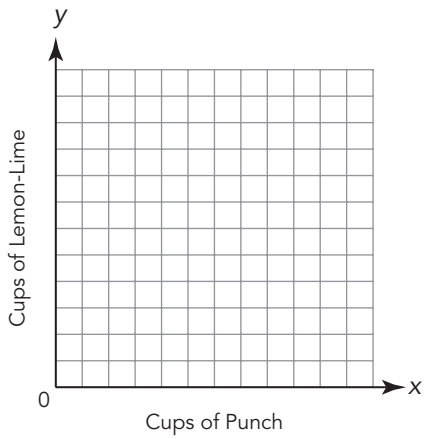
Stretch

An HOn2-scale train is a model train that is constructed at the ratio 1 : 87.1. If an HOn2 model of a locomotive is 10.4712 inches long, how long is the actual locomotive in feet?

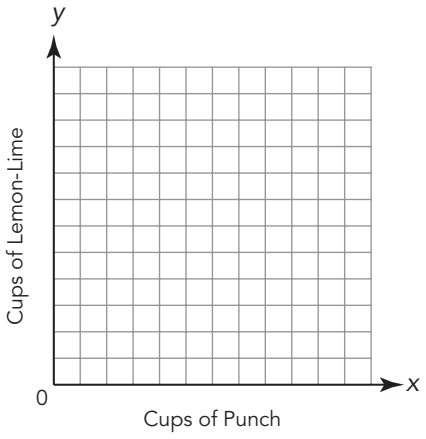
Review

Determine each unit rate and graph each rate on the coordinate plane.

1. $\frac{3}{4}$ cup of punch to $\frac{1}{8}$ cup of lemon-lime



2. 1 cup of lemon-lime : $1\frac{1}{2}$ cups of punch



Answer each question. Use 3.14 for π. Round to the nearest hundredth.

3. The diameter of a circle is 4 cm. Determine the area of the circle.
4. The radius of a circle is 5.24 ft. Determine the circumference of the circle.

Determine each sum or product.

5. 71.05 + 0.54
6. 89.2 × 5.3