Assignment

LESSON 4: Yours IS to Reason Why!

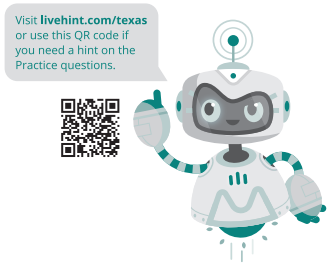
Write

Explain how to use a model to represent the division of two fractions.

Remember

One way to divide two fractions is to rewrite the division problem as multiplication by the reciprocal of the divisor.

Practice



1. Calculate each quotient.

a. $\frac{2}{5} \div \frac{1}{3}$

b. $\frac{7}{8} \div \frac{1}{4}$

c. $\frac{3}{4} \div \frac{1}{6}$

d. $\frac{15}{16} \div \frac{3}{4}$

e. $\frac{7}{12} \div \frac{1}{3}$

f. $1\frac{1}{8} \div \frac{5}{6}$

g. $5\frac{3}{8} \div \frac{1}{4}$

h. $7\frac{1}{3} \div 1\frac{2}{3}$

2. The top of a rectangular table has an area of 21 square feet. The width of the table is $3\frac{1}{2}$ feet. What is the length of the table?

3. The area of a rectangular pendant on a necklace is $\frac{3}{4}$ square inch. The height of the rectangle is $1\frac{1}{4}$ inches. What is the length of the base of the rectangle?

Stretch

Write a word problem that could be modeled by the quotient $2\frac{1}{2} \div \frac{3}{4}$.

Review

1. A triathlon competition consists of swimming, cycling, and running. Not all races cover the same distances. According to USA Triathlon, the international distance triathlon consists of $\frac{9}{10}$ mile swimming, $24\frac{4}{5}$ miles cycling, and $6\frac{1}{5}$ miles running. One of the most famous types of triathlons is an Ironman competition. Competitors in an Ironman competition must swim $2\frac{2}{3}$ times farther than competitors in an international distance triathlon.
   a. Use benchmark fractions to estimate how far competitors must swim in an Ironman triathlon. Show your work.
   b. Calculate the exact distance competitors in an Ironman triathlon must swim. Show your work.

2. Ling is a camp counselor at a local summer camp. She is in charge of the weekly craft activity for 40 campers. She plans to make fabric-covered frames that each require $\frac{1}{6}$ yard of fabric. The camp director gave her $6\frac{2}{3}$ yards of fabric remnants for this project. Does Ling have enough fabric for her craft activity? Show your work.

3. Write the prime factorization for each number. Then, determine the greatest common factor.
   a. 28, 32
   b. 40, 100