

Lesson Objective: Interpret a fraction as division and solve whole-number division problems that result in a fraction or mixed number.

Connect Fractions to Division

Name _____

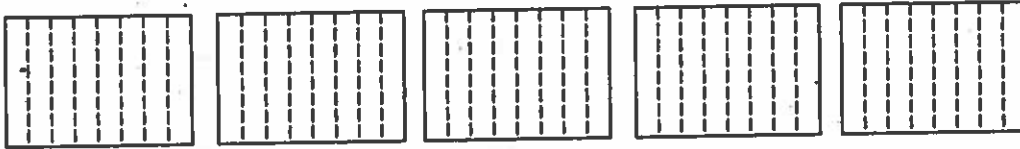
You can write a fraction as a division expression.

$$\frac{4}{5} = 4 \div 5 \quad \frac{15}{3} = 15 \div 3$$

There are 8 students in a wood-working class and 5 sheets of plywood for them to share equally. What fraction of a sheet of plywood will each student get?

Divide. $5 \div 8$ **Use a drawing.**

Step 1 Draw 5 rectangles to represent 5 sheets of plywood. Since there are 8 students, draw lines to divide each piece of plywood into eighths.



Each student's share of 1 sheet of plywood is $\frac{1}{8}$.

Step 2 Count the total number of eighths each student gets.

Since there are 5 sheets of plywood, each student will get 5 of the eighths, or $\frac{5}{8}$.

Step 3 Complete the number sentence.

$$5 \div 8 = \frac{5}{8}$$

Step 4 Check your answer.

Since $\frac{5}{8}$ \times 8 = 5, the quotient is correct.

So, each student will get $\frac{5}{8}$ of a sheet of plywood.

Complete the number sentence to solve.

- Ten friends share 6 pizzas equally. What fraction of a pizza does each friend get?
- Four students share 7 sandwiches equally. How much of a sandwich does each student get?

$$6 \div 10 = \underline{\hspace{2cm}}$$

$$7 \div 4 = \underline{\hspace{2cm}}$$

Connect Fractions to Division

Complete the number sentence to solve.

1. Six students share 8 apples equally. How many apples does each student get?

$$8 \div 6 = \underline{\frac{8}{6}, \text{ or } 1\frac{1}{3}}$$

2. Ten boys share 7 cereal bars equally. What fraction of a cereal bar does each boy get?

$$7 \div 10 = \underline{\hspace{2cm}}$$

3. Eight friends share 12 pies equally. How many pies does each friend get?

$$12 \div 8 = \underline{\hspace{2cm}}$$

4. Three girls share 8 yards of fabric equally. How many yards of fabric does each girl get?

$$8 \div 3 = \underline{\hspace{2cm}}$$

5. Five bakers share 2 loaves of bread equally. What fraction of a loaf of bread does each baker get?

$$2 \div 5 = \underline{\hspace{2cm}}$$

6. Nine friends share 6 cookies equally. What fraction of a cookie does each friend get?

$$6 \div 9 = \underline{\hspace{2cm}}$$

7. Twelve students share 3 pizzas equally. What fraction of a pizza does each student get?

$$3 \div 12 = \underline{\hspace{2cm}}$$

8. Three sisters share 5 sandwiches equally. How many sandwiches does each sister get?

$$5 \div 3 = \underline{\hspace{2cm}}$$

Problem Solving

9. There are 12 students in a jewelry-making class and 8 sets of charms. What fraction of a set of charms will each student get?

10. Five friends share 6 cheesecakes equally. How many cheesecakes will each friend get?
