Word Problems with Fraction Division - Guided Lesson Explanation

Explanation#1

Step 1) First we look to see what is being asked of us.

Step 2) ¾ of an inch divided between 6 people.

$$\frac{3}{4} \div 6$$

Write 6 as an improper fraction:

$$6 = \frac{6}{1}$$

Step 3) Turn this from a division problem into a multiplication problem by multiplying by the reciprocal.

$$\frac{3}{4} \div \frac{6}{1} = \frac{3}{4} \times \frac{1}{6}$$

Cancel common factors, and then multiply.

$$\frac{3}{4} \times \frac{1}{6} = \frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$$

The pizza will cut into $\frac{1}{8}$ inch pieces.

Explanation#2

Step 1) First we look to see what is being asked of us.

Step 2) Divide the total people by the size of the bag of marbles.

$$\frac{2}{5} \div 7$$

Write 7 as an improper fraction:

$$7 = \frac{7}{1}$$

Step 3) Turn this from a division problem into a multiplication problem by multiplying by the reciprocal.

$$\frac{2}{5} \div \frac{7}{1} = \frac{2}{5} X \frac{1}{7}$$

$$\frac{2}{5} \times \frac{1}{7} = \frac{2}{35}$$

They would each receive $\frac{2}{35}$ of the marble bag.

Explanation#3

Step 1) First, we look to see what is being asked of us.

Step 2) Divide the total number of filing cabinets by the size of the receipt pile.

$$\frac{3}{5}$$
 ÷ 4

Write 4 as an improper fraction:

$$4 = \frac{4}{1}$$

Step 3) Turn this from a division problem into a multiplication problem by multiplying by the reciprocal.

$$\frac{3}{5} \div \frac{4}{1} = \frac{3}{5} X \frac{1}{4}$$

$$\frac{3}{5} \times \frac{1}{4} = \frac{3}{20}$$

There are $\frac{3}{20}$ of a yard of receipts in each filing cabinet.