Interpret and Compute Quotients of Fractions - Guided Lesson Explanation
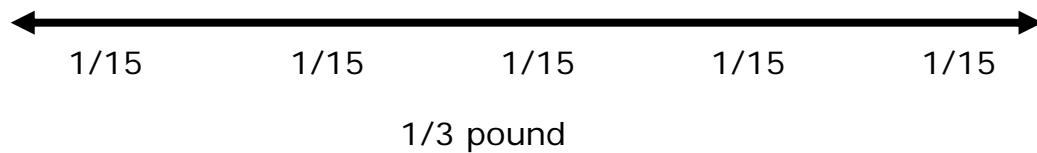
Explanation#1

There are a number of ways to do this. We could divide 3 by 1/4.

$$3 \div \frac{1}{4} = \frac{3}{1} \div \frac{1}{4} = \frac{3}{1} \times \frac{4}{1} = 12$$

Answer is: 12

Explanation#2

If all his 5 friends share 1/3 pound of grapes, it would look like this.

| 1/15 | 1/15 | 1/15 | 1/15 | 1/15 |

1/3 pound

$$1/3 \div 5 = \frac{1}{3} \times \frac{1}{5}$$

So the answer is 1/15 lb.

Explanation#3

If all 4 people share toffee that is ½ lb., it would look like this:

1/8	1/8	1/8	1/8

$\longleftrightarrow$
1/2 pound
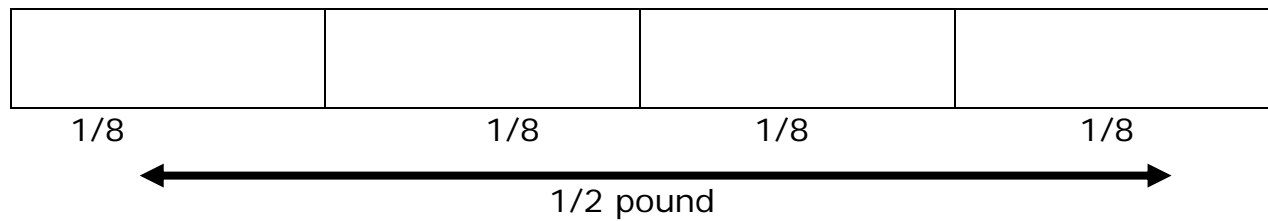
Divide the total amount of toffee by the number of cups

$$\frac{1}{2} \div 4$$

We will write 4 as an improper fraction.

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

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

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

Now multiply:

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

Answer is: 1/8 lb.