

Understand Division with Unit Fractions



Math Tools



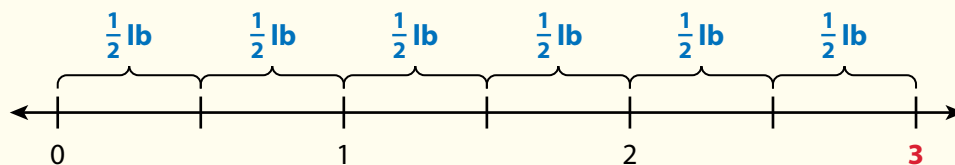
Dear Family,

This week your child is exploring division with unit fractions.

A **unit fraction** is a fraction that has 1 as the numerator. $\frac{1}{6}$ and $\frac{1}{4}$ are examples of unit fractions. To learn about division with unit fractions, your child might see a problem like the one below.

A butcher wants to divide 3 pounds of meat into packages. Each package will contain $\frac{1}{2}$ pound of meat. How many packages can the butcher make?

This problem can be solved by finding $3 \div \frac{1}{2}$. It can be helpful to use a number line model to understand the problem.



The model shows that $3 \div \frac{1}{2} = 6$. The butcher can make 6 packages that each contain $\frac{1}{2}$ pound of meat.

Another way to say this is that the butcher can make 2 packages of meat per pound. An equation that shows this is $3 \times 2 = 6$.

So, this situation can be represented by either a division equation or a multiplication equation. Your child is learning that division and multiplication with fractions are related, just like division and multiplication with whole numbers are related.

Invite your child to share what they know about division with unit fractions by doing the following activity together.

ACTIVITY DIVIDING WITH UNIT FRACTIONS

Do this activity with your child to understand division with unit fractions.

Work together with your child to solve real-life problems involving division with unit fractions.

- Together with your child, use the picture to solve the problem below.
 1. Suppose you want to give each person in your family a snack of half of a sandwich. The sandwiches are shown below. How many people can get a snack with these 4 sandwiches? Are there enough sandwiches for your family, too many, or too few?



- Look for similar situations in everyday life that involve dividing with a unit fraction. Below are some examples of problems you could solve.
 2. Suppose you divide 2 hours of piano practice into sessions of $\frac{1}{2}$ hour each. How many sessions do you have to practice?
 3. One lap around the track is $\frac{1}{4}$ mile. How many laps do you need to do to run 3 miles?

Answers:

1. $4 \div \frac{1}{2} = 8$; 8 people can get a snack; 2. $2 \div \frac{1}{2} = 4$ sessions; 3. $3 \div \frac{1}{4} = 12$ laps