

Divide Unit Fractions in Word Problems



Math Tools



Fraction Models

Dear Family,

This week your child is learning about dividing with unit fractions in word problems.

Your child might see a word problem like the one below.

Kennedy uses $\frac{1}{4}$ square yard of fabric to decorate 4 flags. She uses an equal amount of fabric for each flag. How much fabric does she use for each flag?

This problem can be solved by finding $\frac{1}{4} \div 4$.

One way to understand this problem is to use a model.

The top square shown at the right represents 1 whole square yard of fabric. The shaded rectangle represents the $\frac{1}{4}$ square yard that Kennedy uses to decorate the 4 flags.

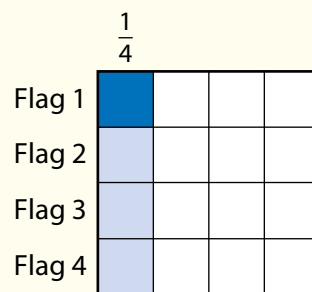
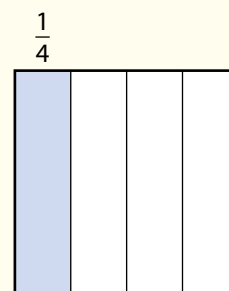
You can divide the shaded rectangle into 4 equal parts to represent the 4 flags Kennedy decorates.

The part shaded darker shows the amount used for 1 flag. 1 out of 16 parts of the whole square yard is used for 1 flag. Kennedy uses $\frac{1}{16}$ square yard of fabric for each flag.

Your child can also write a division equation to solve the problem.

$$\frac{1}{4} \div 4 = \frac{1}{16}$$

Invite your child to share what they know about dividing with unit fractions in word problems by doing the following activity together.



ACTIVITY DIVIDING BY UNIT FRACTIONS

Do this activity with your child to divide by unit fractions in word problems.

Materials yardstick, tape measure, or ruler

- Together with your child, solve the problem below about dividing by a unit fraction.

How many square tiles are needed to make a border along a wall? Each tile measures $\frac{1}{3}$ foot on each side, and the wall is 6 feet long.



- Now suppose you are going to use the tiles to make a border along a wall in your own house. First, measure to find the length of the wall in feet. Then round your measurement to the nearest foot. Last, divide that number by $\frac{1}{3}$ to find the number of tiles you would need.



Answer: $6 \div \frac{1}{3} = 18$; 18 tiles