# Multiply Fractions to Find Area

## Dear Family,

### This week your child is learning to multiply fractions to find the area of rectangles.

He or she might see a problem like this:

*Mark has a square placemat that measures 1 foot on each side. He divides it in half vertically and in thirds horizontally. He wants to decorate each part with a different pattern. What is the area of each part of the placemat?*

To understand the problem, your child could draw and label a picture.
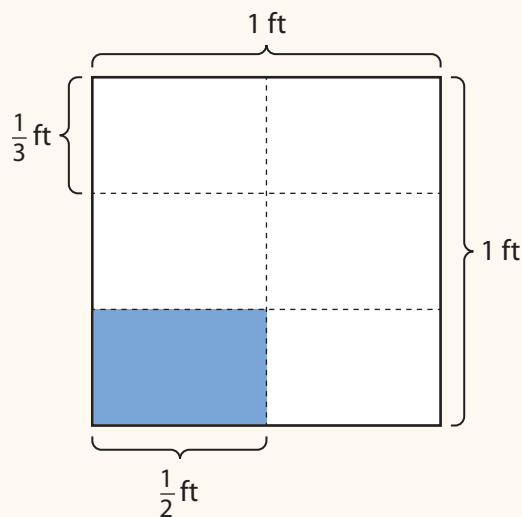
The dashed lines show 6 equal parts.

Each part is $\frac{1}{2}$ foot wide and $\frac{1}{3}$ foot long. Each part is $\frac{1}{6}$ of the whole.

Multiply to find the area of each part.

$$\frac{1}{2} \text{ foot} \times \frac{1}{3} \text{ foot} = \frac{1}{6} \text{ square foot}$$

The area of each part of the placemat is $\frac{1}{6}$ square foot.

Invite your child to share what he or she knows about multiplying fractions to find the area of rectangles by doing the following activity together.

## ACTIVITY  MULTIPLYING FRACTIONS TO FIND AREA

**Do this activity with your child to find the area of a rectangle by multiplying fractions.**

- Look at the rectangle below.

$\frac{4}{5}$ yard

$\frac{2}{3}$ yard
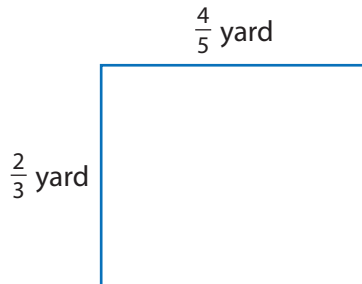
- Remind your child that you can find the area of a rectangle by multiplying the length by the width. (area = length $\times$ width)

- Together with your child, find the area of the rectangle shown above by multiplying the length by the width.

- Check your answer by using an area model. The square below has an area of 1 square yard. Ask your child to shade parts of the square below to show the same area as the rectangle above.

1 yard

1 yard
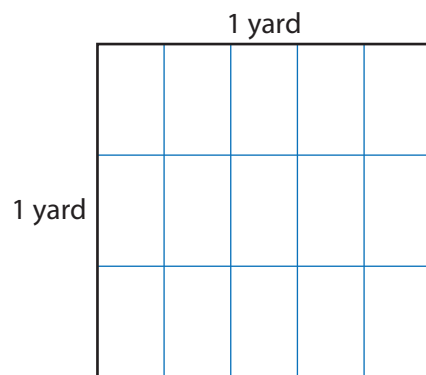
- Together with your child, find the area of the shaded part of the square by finding the fraction of the square that is shaded. Ask your child: *Does this match your answer from above?*

***Answer:*** Area = $\frac{4}{5}$ yard $\times$ $\frac{2}{3}$ yard = $\frac{8}{15}$ square yard

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