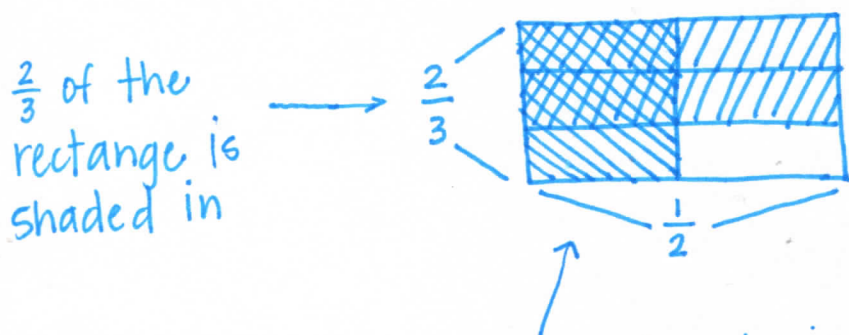


# Multiplying Fractions

$$\frac{2}{3} \times \frac{1}{2}$$

Just like the array for  $2 \times 5$  is:  $2 \begin{array}{|c|c|c|c|} \hline & & & \\ \hline & & & \\ \hline \end{array}$ , you can think of multiplication of fractions the same way. Multiplying  $\frac{2}{3} \times \frac{1}{2}$  will look like this:



After the rectangle is divided in  $\frac{1}{2}$ 's and  $\frac{1}{3}$ 's, the total amount of pieces in the rectangle is 6, so the rectangle is divided into sixths.

2 out of the 6 pieces were used for both fractions, so  $\frac{2}{3} \times \frac{1}{2} = \frac{2}{6}$ , or simplified,  $\frac{1}{3}$ .

A simpler way to multiply fractions is to multiply the numerators, multiply the denominators, then simplify.

For example:  $\frac{2}{3} \times \frac{1}{2} = \frac{2 \times 1}{3 \times 2} = \frac{2}{6} \rightarrow \text{simplify} \rightarrow \frac{1}{3} \cup$