

## Multiplying Fractions

Multiplying fractions can be demonstrated in a way similar to multiplying whole numbers using a rectangular array. For example,  $4 \times 3$  can be represented like so:


As for fractions, if we want to multiply  $\frac{2}{3} \times \frac{2}{5}$ , we can draw a rectangle where one side is divided into thirds and the other side is divided into fifths. Then, we can form an internal rectangle that has side lengths of 2 thirds and 2 fifths. The area of the small rectangle (which will end up being the numerator of the product) compared against the area of the whole, large rectangle (which will end up being the denominator of the product) gives the value of the multiplication problem.

$$\frac{1}{4} \times \frac{4}{7}$$


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


$$\frac{1}{4} \times \frac{3}{5}$$


$$\frac{2}{5} \times \frac{5}{6}$$


$$\frac{1}{5} \times \frac{3}{8}$$


$$\frac{2}{3} \times \frac{3}{4}$$


$$\frac{5}{7} \times \frac{1}{6}$$


$$\frac{4}{5} \times \frac{2}{3}$$
