

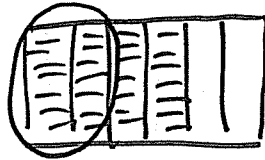
Mathematics 8

Section 3.2 – Using Models to Multiply Fractions

Think About It:

What does $\frac{1}{2} \times \frac{4}{6}$ really mean? And, what is the solution to it?

take one half of $\frac{4}{6}$



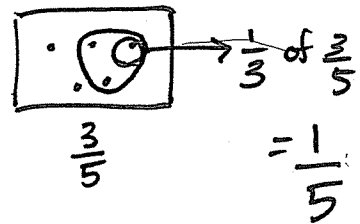
↳ half of the $\frac{4}{6} = \frac{2}{6} = \frac{1}{3}$

Notes:

In this section we will use the models from last class to assist us in finding our solutions. One helpful hint is to think of the multiplication sign between the two proper or improper fractions as the word 'OF'.

For instance, $\frac{1}{2} \times \frac{4}{6}$ is really asking what is $\frac{1}{2}$ of $\frac{4}{6}$?

Example 1: Multiply $\frac{1}{3} \times \frac{3}{5}$ Read as: what is $\frac{1}{3}$ of $\frac{3}{5}$.

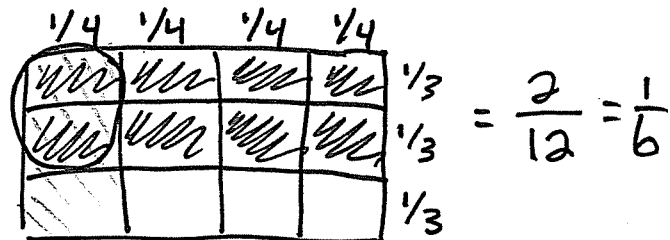


$\frac{1}{2} \times \frac{2}{4} = \frac{1}{4}$

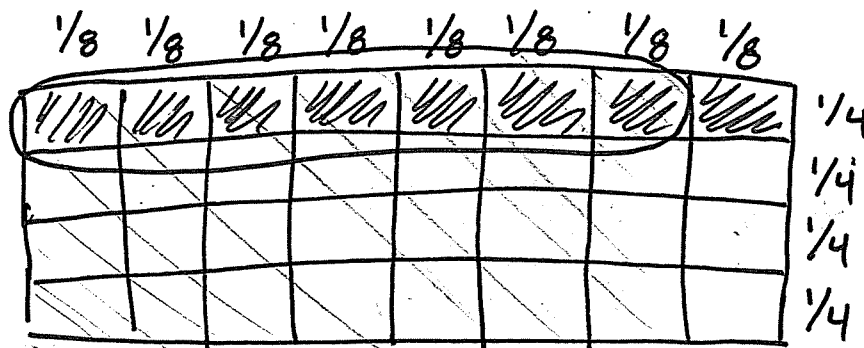
Example 2: Multiply $\frac{1}{4} \times \frac{2}{3}$ Read as: what is $\frac{1}{4}$ of $\frac{2}{3}$.

Notes for rectangles:

- ① Split into fraction size of 1st fraction (4ths 4 columns)
- ② Split into fraction size of 2nd fraction (3rds 3 rows)
- ③ colour in amount of rows by numerator in 2nd fraction.
- ④ take only the squares from column determined from numerator in 1st fraction



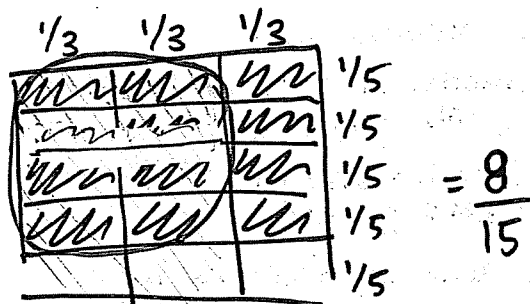
Example 3: Multiply $\frac{7}{8} \times \frac{1}{4}$ Read as: what is $\frac{7}{8}$ of $\frac{1}{4}$.



$$= \frac{7}{32}$$

Example #4: One-half of the Grade 8 students tried out for the school's lacrosse team. Three-quarters of these students were successful. What fraction of the Grade 8 students are on the team?

Example #3.5 $\frac{2}{3} \times \frac{4}{5} \rightarrow \frac{2}{3}$ of $\frac{4}{5}$



$$= \frac{8}{15}$$