Sec. 3.2 Using Models to Multiply Fractions

1. Fraction of a fraction
What does it mean to take a fraction of a fraction?

> ➢ When you are taking a fractional amount of something, it's like you're taking less than one group of something. It is like multiplication.

For example:

If 3 groups of 4 means 3×4,

and 1 group of 4 means 1×4
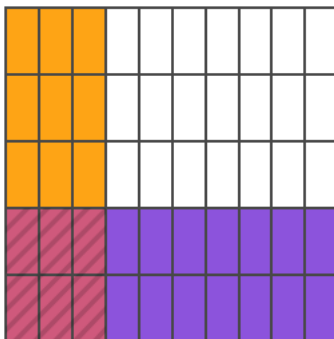
then, $\frac{1}{5}$ of 4 means $\frac{1}{5} \times 4$

and $\frac{1}{4}$ of $\frac{2}{3}$ means $\frac{1}{4} \times \frac{2}{3}$

2. How to Model Fraction x Fraction ($\frac{1}{4} \times \frac{2}{3}$)

1) Draw a rectangle. 2) Break into denominator parts of 2nd fraction horizontally 3) Shade numerator parts using 2nd fraction 4) Break into denominator parts of 1st fraction vertically 5) Double shade numerator parts using 1st fraction 6) Compare double shaded to whole. This is the answer.	

Practice!

1) Write the multiplication equation represented by the following diagram.	2) Use a model to represent the multiplication of $\frac{2}{5} \times \frac{3}{4}$

3) One-third of Ms. Lo's grade 8 students went to Dairy Queen to get a hot fudge sundae. Three-quarter of these students also decided to buy some fries.

   a) Write the multiplication statement for this situation.

   b) What fraction of Ms. Lo's students had a hot fudge sundae and fries? Model the solution with a diagram.