

## Lesson 7: The Relationship Between Visual Fraction Models and Equations

### Classwork

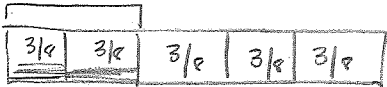
#### Example 1

Model the following using a partitive interpretation. (Solve using a strategy)

$$\frac{3}{4} \div \frac{2}{5} \quad \frac{2}{5} \text{ is what \# of } \frac{3}{4}.$$

multiplication

$$\frac{3}{4} \cdot \frac{5}{2} = \frac{15}{8} = 1\frac{7}{8}$$



Equiv.

$$\frac{3}{4} \times \frac{5}{2} = \frac{15}{8}$$

$$\frac{2}{5} \times 4 = \frac{8}{20}$$

$$\frac{15}{8} = 1\frac{7}{8}$$

$$2 \text{ units} = \frac{3}{4} \quad \frac{3}{4} \div 2 \quad \frac{3}{4} \cdot \frac{1}{2} = \frac{3}{8}$$

$$1 \text{ unit} = \frac{3}{8}$$

$$5 \text{ units} = 5 \times \frac{3}{8} \quad \frac{5}{1} \cdot \frac{3}{8} = \frac{15}{8} = 1\frac{7}{8}$$

Shade 2 of the 5 sections  $\left(\frac{2}{5}\right)$ .

Label the part that is known  $\left(\frac{3}{4}\right)$ .

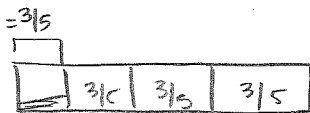
Make notes below on the math sentences needed to solve the problem.

$$\frac{2}{5} \sqrt{12}$$

Example 2

Model the following using a measurement interpretation.

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



1 unit =  $\frac{3}{5}$

4 units =  $\frac{3}{5} \times 4 = \frac{12}{5} = \left(\frac{2\frac{2}{5}}{1}\right)$

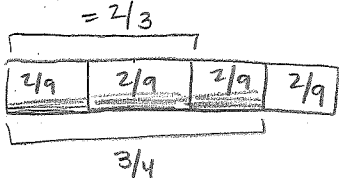
Mult.  $\frac{3}{5} \cdot \frac{4}{1} = \frac{12}{5} = \left(\frac{2\frac{2}{5}}{1}\right)$

Equiv.  $\frac{3}{5} \times 4 = \frac{12}{5}$       $\frac{12}{20} \div \frac{5}{20}$       $\frac{12}{5} = \left(\frac{2\frac{2}{5}}{1}\right)$

$\frac{1}{4} \times 5 = \frac{5}{20}$

Example 3

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



3 units =  $\frac{2}{3}$

1 unit =  $\frac{2}{9}$

4 units =  $\frac{2}{9} \times 4 = \left(\frac{8}{9}\right)$

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

$\frac{2}{3} \cdot \frac{4}{3} = \frac{8}{9}$

Multiplication  $\frac{2}{3} \cdot \frac{4}{3} = \left(\frac{8}{9}\right)$

Equiv.  $\frac{2}{3} \times 4 = \frac{8}{12}$       $\left(\frac{8}{9}\right)$

$\frac{3}{4} \times 3 = \frac{9}{12}$

Show the number sentences below.