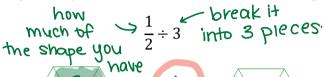Name: _____   Date: _____

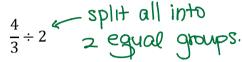| Learning Goal 2.2	I can multiply and divide fractions.

Example Use **pattern blocks** to model the following quotients.

how much of the shape you have → $\frac{1}{2} \div 3$ ← break it into 3 pieces.

= $\frac{1}{6}$

How big is each piece?
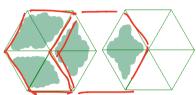
$\frac{4}{3} \div 2$ ← split all into 2 equal groups.

Each group has $\frac{4}{6}$ pieces

= $\frac{2}{3}$

Example Use **fraction strips** to model the following quotients.

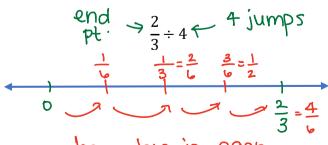I have a half → $\frac{1}{2} \div 3$ ← Break it into 3 pieces

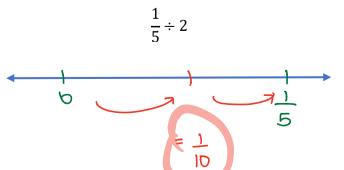| 1	2
3	4
5	6

= $\frac{1}{6}$

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

1	2	3	4
5	6	7	8

= $\frac{3}{8}$

Example Use **the number line** to model the following quotients.

end pt. → $\frac{2}{3} \div 4$ ← 4 jumps

$\frac{1}{6}$ $\frac{1}{3} = \frac{2}{6}$ $\frac{3}{6} = \frac{1}{2}$ $\frac{2}{3} = \frac{4}{6}$

how big is each jump?

= $\frac{1}{6}$ = $\frac{2}{12}$

$\frac{1}{5} \div 2$

0                               $\frac{1}{5}$

= $\frac{1}{10}$

Assignment   p. 208 #4 – 12   Quiz Next Day!

Dividing Fractions and a Whole Number Without using a Model

$$\frac{\text{leave the numerator alone}}{(\text{the old denominator}) \times (\text{the whole \#})} \quad \text{then simplify if necessary}$$

Example Evaluate the following quotients. Write your answers i4n lowest terms.

a. $\frac{1}{5} \div 3 = \frac{1}{15}$

b. $\frac{4}{5} \div 2 = \frac{4 \div 2}{10 \div 2} = \frac{2}{5}$

c. $\frac{1}{6} \div 3 = \frac{1}{18}$

d. $\frac{9}{10} \div 5 = \frac{9}{50}$

Example Ben used $^3/_4$ of a jar of pasta sauce on six servings of pasta. He used the same amount of sauce on each serving. What fraction of the jar of pasta sauce did he use on each serving?

$$\frac{3}{4} \div 6$$

$$= \frac{3 \div 3}{24 \div 3}$$

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

$\cancel{6 \div \frac{3}{4}}$

Each person gets $\frac{1}{8}$th of a jar of pasta sauce.

Example Four students equally shared $^1/_2$ of a cake. What fraction of the cake did each student eat?

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

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

$\cancel{4 \div \frac{1}{2}}$

Each student will get 1/8th of the cake.