Name _____

Compare Fraction Products

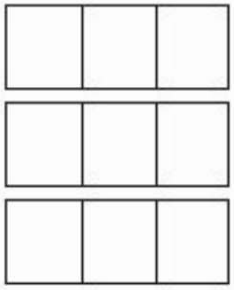
Essential Question How does the size of the product compare to the size of each factor when multiplying fractions in real-world situations?

UNLOCK the Problem REAL WORLD

One Way Use a model.

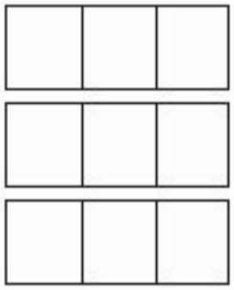
A. Serena uses $\frac{2}{3}$ yard of fabric to make a pillow. How much fabric does she need to make 3 pillows?

- Shade the model to show 3 groups of $\frac{2}{3}$.
- Write an expression for three groups of $\frac{2}{3}$: _____ × _____.
- What can you say about the product when $\frac{2}{3}$ is multiplied by a whole number? Write *greater than* or *less than*. The product is _____ $\frac{2}{3}$.



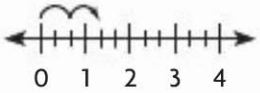
B. Serena has 3 yards of fabric. She uses $\frac{2}{3}$ of it to make a blanket. How much fabric does she use to make the blanket?

- There are 3 wholes. Each represents one yard.
- Shade $\frac{2}{3}$ of each whole.
- Write an expression for $\frac{2}{3}$ of three wholes: _____ × _____
- What can you say about the product when 3 is multiplied by a fraction less than 1? Write *greater than* or *less than*. The product is _____ 3.



Another Way Use a number line.

A. Show $\frac{2}{3} \times 2$.



B. Show $\frac{2}{3} \times 3$.

Complete each statement with *greater than* or *less than*.

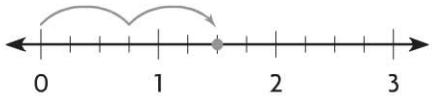
- The product of $\frac{2}{3}$ and 2 is _____ $\frac{2}{3}$.
- The product of a whole number greater than 1 and $\frac{2}{3}$ will be _____ the whole number factor.

Math Talk What if a different fraction was multiplied by 2 and 3? Would your statements still be true? **Explain.**

Share and Show

1. Complete the statement with *greater than* or *less than*.

$2 \times \frac{3}{4}$ will be _____ $\frac{3}{4}$.



Complete each statement with *greater than* or *less than*.

2. $3 \times \frac{2}{5}$ will be _____ 3.

3. $3 \times \frac{1}{3}$ will be _____ $\frac{1}{3}$.

On Your Own

Complete each statement with *greater than* or *less than*.

4. $3 \times \frac{3}{8}$ will be _____ $\frac{3}{8}$.

5. $\frac{5}{6} \times 5$ will be _____ $\frac{5}{6}$.

6. $\frac{3}{10} \times 6$ will be _____ $\frac{3}{10}$.

7. $4 \times \frac{5}{9}$ will be _____ 4.

Problem Solving

8. Celia wants to sew 4 pillows. She needs $\frac{3}{8}$ yard of fabric for each pillow. Will she need more than $\frac{3}{8}$ yard or less than $\frac{3}{8}$ yard of fabric to make all the pillows? Explain.

_____

_____

_____

_____

9. Rohan walks $\frac{3}{4}$ mile to school each day. After 5 days, will Rohan have walked more than 5 miles or less than 5 miles to school? Explain.

_____

_____

_____

_____