3.3 (H)

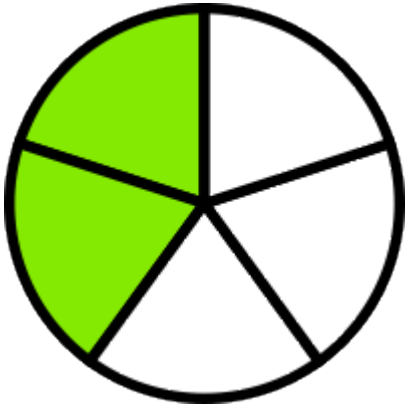
Compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols, words, objects, and pictorial models

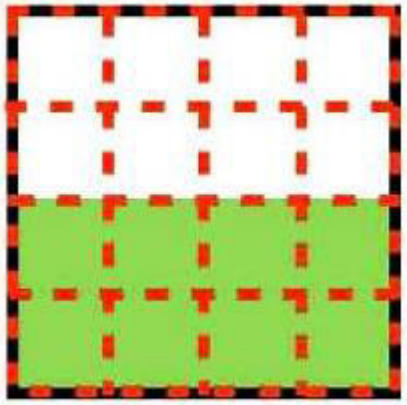
INTERVENE

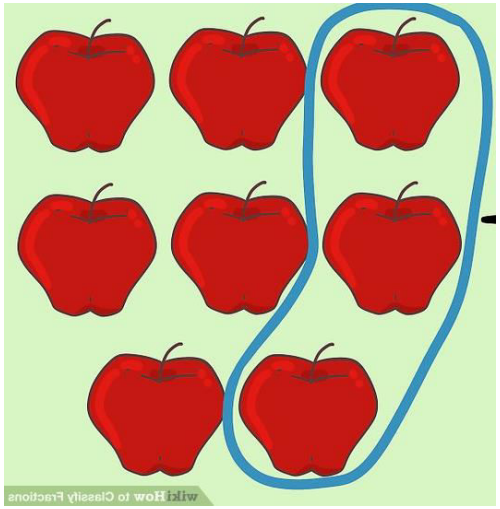
<1 min

Fluency Practice

- Identify the fractions represented by each figure







2 min

Problem Solving Strategies

Step 1: Show what you know

- If there's a vocabulary word you know, write or draw something to show you know it.

Step 2: Solve and Check

- Add to check your subtraction, etc

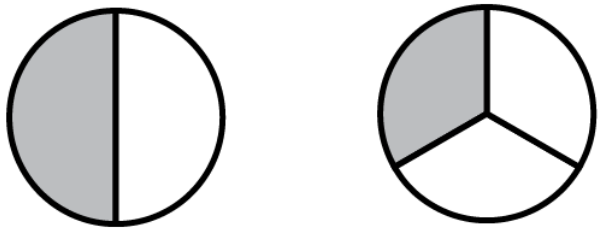
Step 3: Eliminate and Justify

- Don't just cross answers out and pick your favorite choice.
- SHOW why a choice is wrong.

<3 min

Lesson

- When comparing fractions look at the sizes of the parts of the figures.



$$\frac{1}{2} > \frac{1}{3}$$

- If you don't have a picture draw one

1 min

Example

- Compare 3/8 and 6/12

- 3/8 < 6/12

Denominator and Numerator

1. The denominator is the number of equal pieces in each (or just 1) whole. The denominator is 8 here because there are 8 equal pieces in 1 whole.

2. The numerator is the number of shaded parts. The numerator in the above example is 3

$$\frac{3}{8}$$

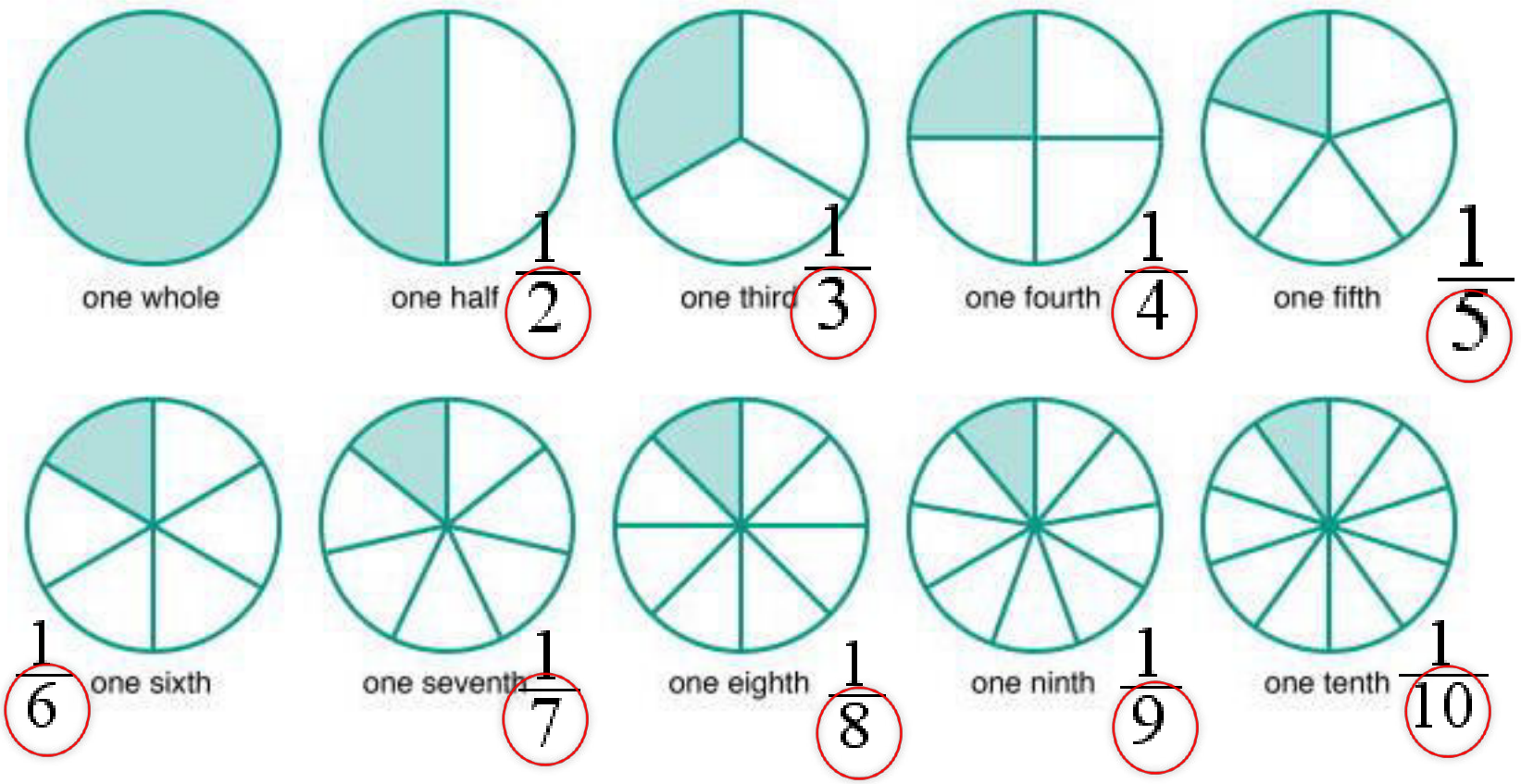
numerator

denominator

Look at this pattern

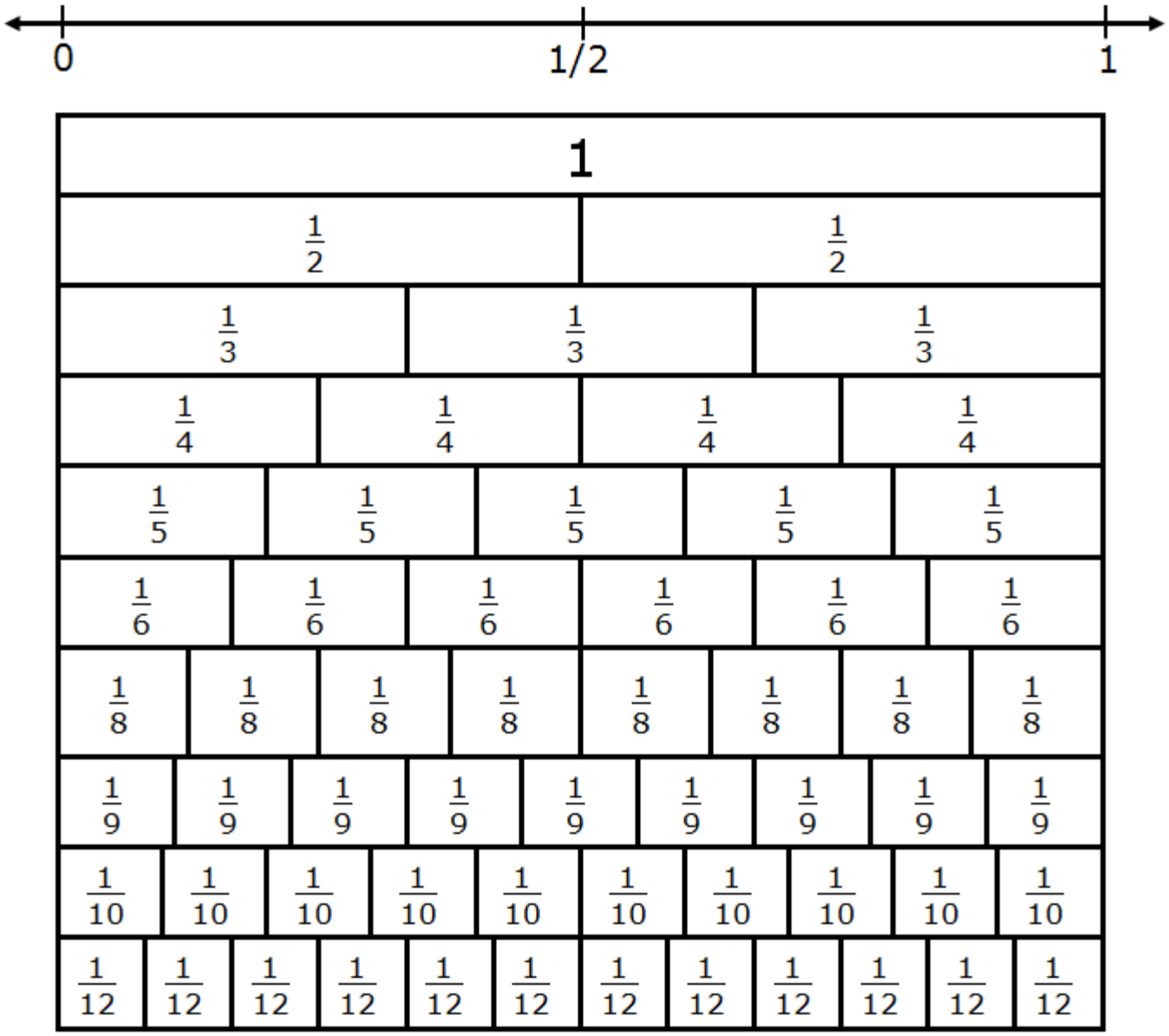
- Imagine you're eating a pizza. It's just you and your best friend. Each of you will get ½ of the pizza!
- You're about to take your first bite, but then another friend comes knocking on the door. They want pizza too! So now…you only get 1/3 of the pizza.
- What if yet another friend comes knocking on the door? You'd only have ¼ of the pizza to yourself.
- If we keep cutting the whole into more equal pieces (denominator gets bigger), the pieces actually get smaller.

Denominator gets bigger, each piece gets smaller!



Can you shade in half, one third, one fourth, one fifth, one sixth, one eighth, one ninth, one tenth, and one twelfth?

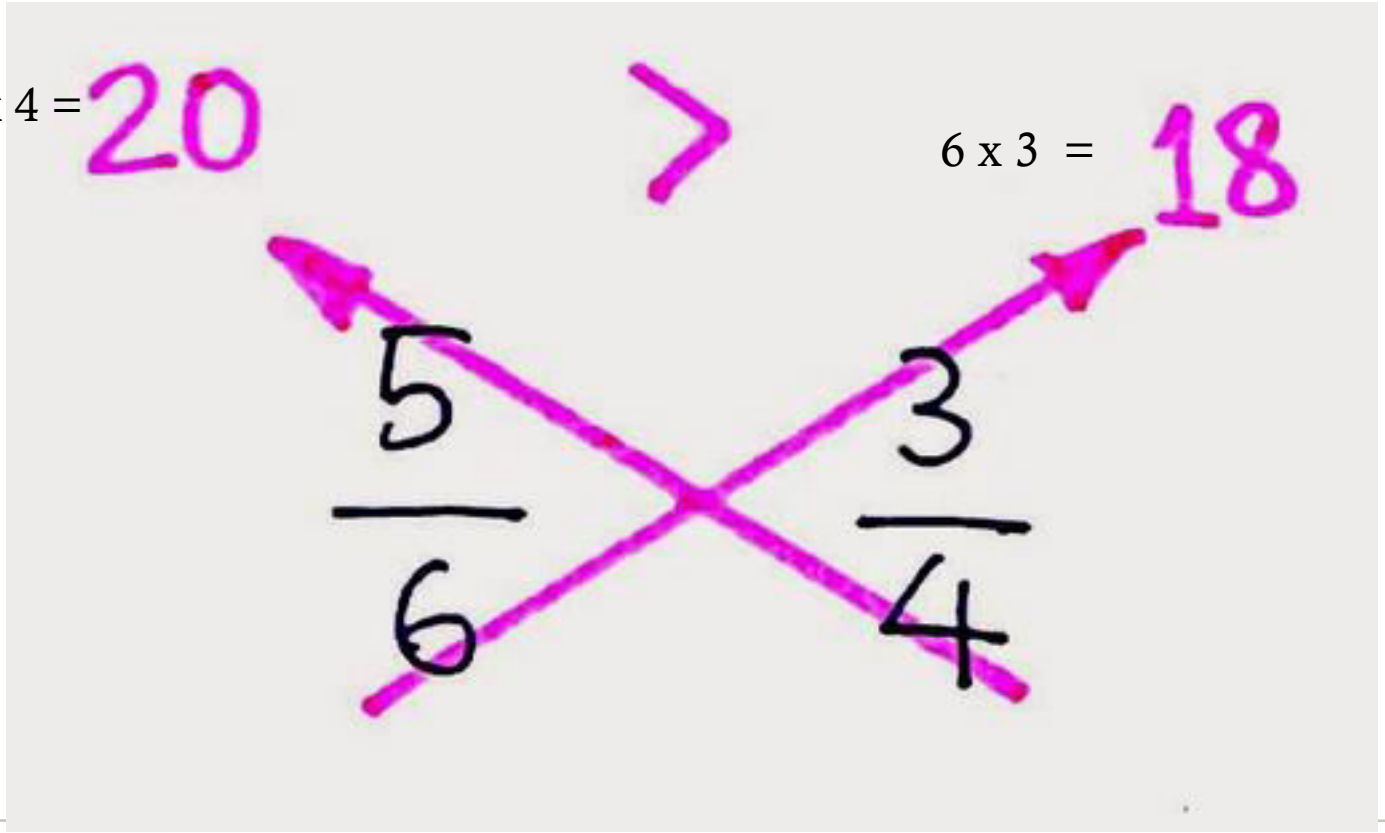
Do you see the same pattern?



Here's a trick

Cross multiply to see which fraction is bigger

Use it to CHECK your work!



Here's what we'll practice today

- Compare fractions to see which is shaded more or further from 0 (number line)
- If there's no picture, **draw one**
- if there is a picture but it's not labeled with what the fraction is, then **label it**
- If there's a number line, label each part with the fraction
- **Check** by cross multiplying

I Do

When you see fractions, try to draw them out

Bailey and Dylan each had pies that were the same size. Bailey ate $\frac{1}{3}$ of his pie. Dylan ate $\frac{1}{4}$ of his pie. Which statement is true?

F The boys ate the same amount of pie, because both fractions have a numerator of 1.

G Bailey ate more pie, because each slice of a pie cut into 3 equal parts is larger than each slice of a pie cut into 4 equal parts.

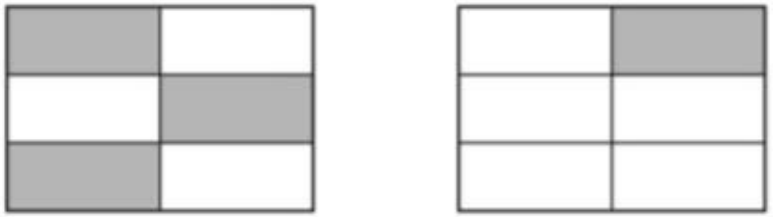
H Dylan ate more pie, because a denominator of 4 is larger than a denominator of 3.

J There is not enough information to determine who ate more pie.

<5 min

We do - Question 1

Lily is painting two identical walls. The models are shaded to represent the fraction of each wall that is painted purple.



Which comparison of these fractions is true?

A $\frac{3}{6} = \frac{5}{6}$

B $\frac{3}{6} > \frac{1}{6}$

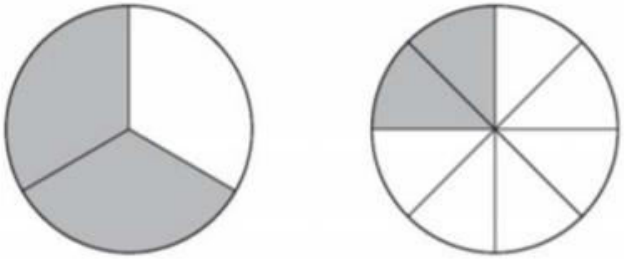
C $\frac{3}{6} > \frac{5}{6}$

D $\frac{3}{6} < \frac{1}{6}$

<5 min

We Do – Question 2

The models shown are the same size and are each divided into equal parts. The models are shaded to show two fractions.



Based on the models, which statement is true?

A $\frac{1}{3}$ is greater than $\frac{6}{8}$, because thirds are larger than eighths

B $\frac{2}{3}$ is greater than $\frac{2}{8}$, because 2 shaded parts out of 3 parts is greater than 2 shaded parts out of 8 parts

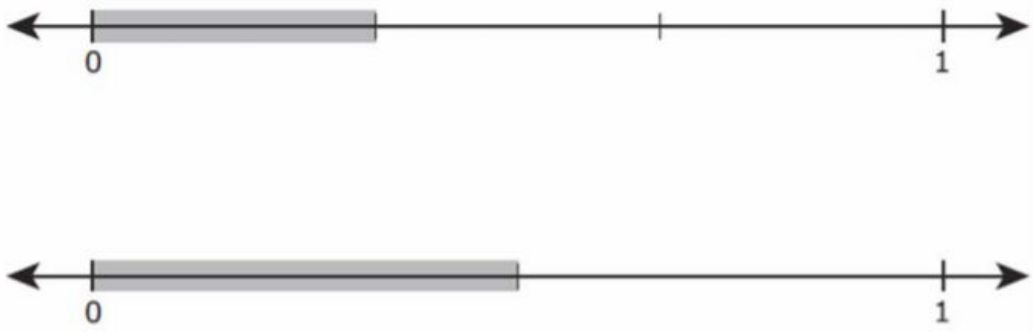
C $\frac{1}{3}$ is less than $\frac{2}{8}$, because 1 shaded part out of 3 parts is less than 2 shaded parts out of 8 parts

D $\frac{2}{3}$ is less than $\frac{2}{8}$, because thirds are smaller than eighths

<5 min

We do - Question 3

Daniel shaded these two number lines to model two different fractions.



Based on the number lines, which comparison is true?

A $\frac{1}{3} > \frac{1}{2}$

B $\frac{1}{3} = \frac{1}{2}$

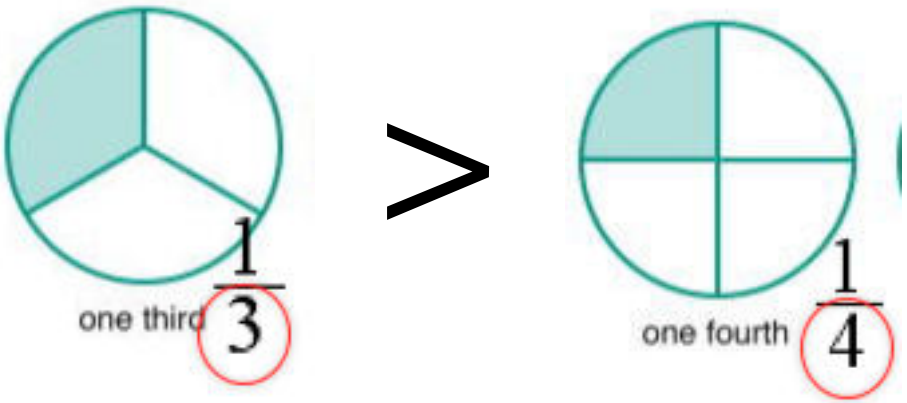
C $\frac{1}{3} < \frac{1}{2}$

D $\frac{2}{3} < \frac{1}{2}$

<5 min

Debrief

- If the denominator increases, that means each piece is actually getting smaller



1 min

You Do

- Go back to Intervene to take your quiz!