Fractions on a Number Line

Remember, fractions are part of a whole. We have been practicing fractions of objects, like cupcakes, pizzas, and paper. Can we use fractions for measuring lengths of distance? Of course we can! That is why we learn how to use fractions on a number line.

Vocabulary	
Numerator	The number on **top** of the fraction. The **shaded length** of the number line that **shows how much of the length is being used**.
Denominator	The number on the **bottom** of the fraction. The **total number of equal sized pieces** the unit of length has been **partitioned** into.
Equivalent	When two fractions are of **equal** value.

Understanding Number Lines!

1. Number lines go on FOREVER! That is what those arrows on the ends stand for.
2. Number lines are already broken into equal sized pieces. (1, 2, 3, 4, etc.)
3. Fractions are the spaces BETWEEN the whole numbers.

This side of fraction number line represents nothing. No value at all.

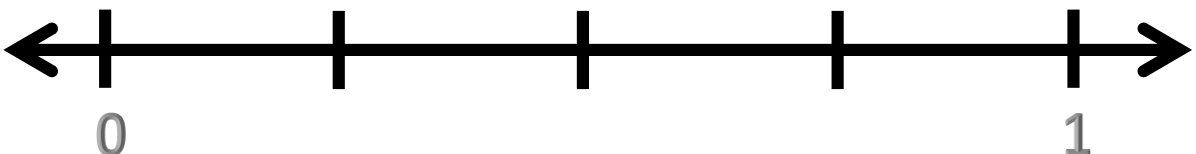This side of fraction number line represents one whole unit. Usually a measure of distance.
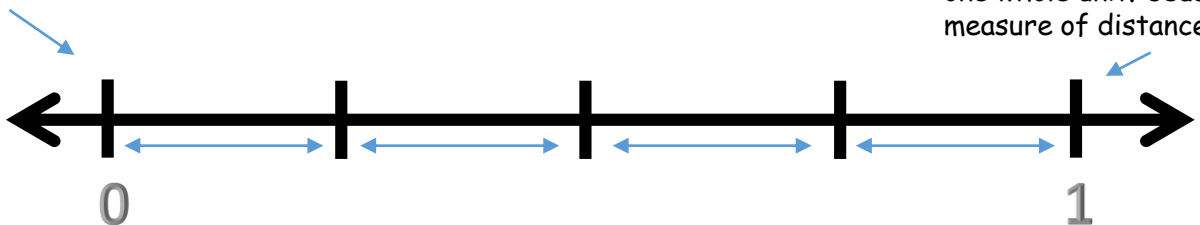
The above fraction has been broken into _____ pieces.

Representing Fractions on Number Lines!

Use the number line below to show where the following fractions would be:

A: 3/4
B: 1/2
C: 0/8
D: 6/6

Partitioning Number Lines!

Partitioning number lines is a lot like partitioning rectangles. Use your previously learned skills to help you learn this new one!

Partition this number line into halves. Put a star on top of 2/2.

0   1

Partition this number line into thirds. Put a star on top of 1/3.

0   1

Partition this number line into fourths. Put a star on top of 2/4.

0   1

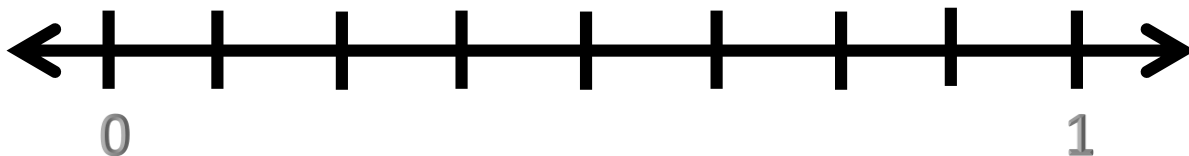Partition this number line into sixths. Put a star on top of 0/6.

0   1

Partition this number line into eighths. Put a star on top of 6/8.

0   1

On this number line, show where 1/2, 1/3, and 7/8s would be..

0   1

Test Practice!

0   1

Use the number line above to answer the following questions and complete the learning tasks.

1.   How many segments has the number line been partitioned into? _____

2. Place the following fractions on the number line.
    a) 0/8
    b) 4/8
    c) 6/8
    d) 8/8

3. Shade in a length of the number line to represent the fraction $\frac{1}{4}$.

4. According to the number line 1/2 is _____ 4/8.