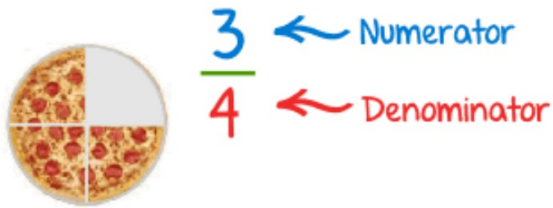


## Important VOCABULARY to know...

### Numerator

The TOP number in a fraction

It shows how many parts we have (or are shaded).



We have 3 slices of the pizza.



2  
3  
2 of the circles are shaded.

### Denominator

The bottom number of a fraction...

think "down"-ominator

The number of parts the whole is divided into or total number of parts in a set.



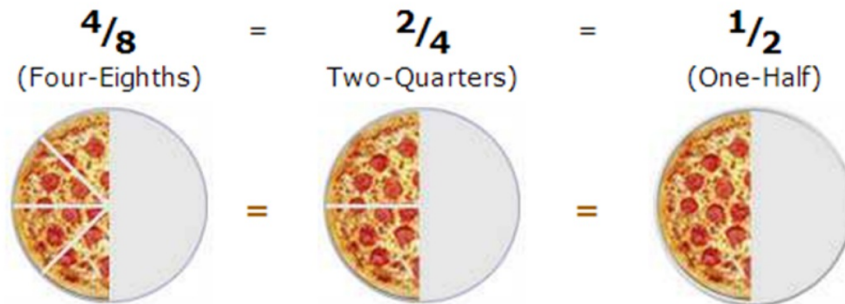
For example, this pizza was originally cut into 4 pieces.



2  
3  
There are a total of 3 parts in this set of circles.

# Equivalent fractions

Fractions that have the same value, even though they may look different



These fractions are all the same because they all equal half of a pizza.

# Common factors

**Factors** are the numbers you multiply together to get another number

When you find all the factors of two or more numbers, and then find some factors that are the same ("common"), then they are the "common factors".

Example: 12 and 30

\* The factors of 12 are: 1, 2, 3, 4, 6 and 12

\* The factors of 30 are: 1, 2, 3, 5, 6, 10, 15 and 30

So the common factors of 12 and 30 are: 1, 2, 3 and 6

# Greatest common factor (GCF)

The highest number that divides exactly into two or more numbers.

How to find the **GCF**:

1. Find all of the factors of 2 or more numbers
2. Circle all of the "common factors"
3. The largest of the common factors is the Greatest Common Factor!

Example: 12 and 30

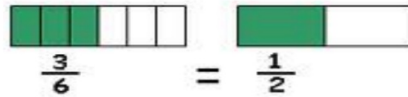
\* The factors of 12 are: 1, 2, 3, 4, 6 and 12

\* The factors of 30 are: 1, 2, 3, 5, 6, 10, 15 and 30

Common factors of 12 and 30 are: 1, 2, 3 and 6

**GCF: 6**

## Simplest form



When the top and bottom of a fraction cannot be any smaller (while still being whole numbers).

To find the **simplest form** of a fraction, divide both the numerator and denominator by the **greatest common factor**.

### Step 1

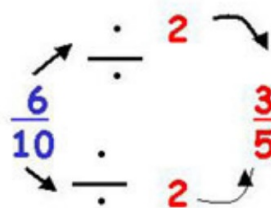
Find the **common factors** of the numerator and denominator.

**Factors of 6: 1, 2, 3, 6**

**Factors of 10: 1, 2, 5, 10**

The greatest common factor is 2.

Simplify  $\frac{6}{10}$



### Step 2

Divide the numerator and denominator by the **greatest common factor**.

# Multiple

What you get when you multiply it by other numbers (such as if you multiply it by 1,2,3,4,5, etc). Just like the multiplication table or skip-counting.

Example: Multiples of 2: 2, 4, 6, 8, 10, 12, 14....

	1	2	3	4	5	6	7	8	9	10
Count in: 2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
10	10	20	30	40	50	60	70	80	90	100

## Least common multiple (LCM)

The smallest number that is a multiple of two or more numbers.

To find the LCM:

1. List all multiples of the numbers you are given
2. Find the smallest number they both have in common as a multiple. That is your LCM.

The least common multiple of 3 and 4 is 12. Why?

Multiples of 3: 3, 6, 9, 12, 15, 18, 21, 24

Multiples of 4: 4, 8, 12, 16, 20, 24

12 is the lowest of the common multiples for 3 and 4.

**You try it!**

Find the Least Common Multiple

8, 4, 6

8 → 8, 16, 24, 32, 40, 48

4 → 4, 8, 12, 16, 20, 24, 28, 32

6 → 6, 12, 18, 24, 30, 36

# Least common denominator (LCD)

The smallest number that can be used for all denominators of 2 or more fractions.

To find the LCD:

1. List the multiples of each denominator

3: 3, 6, 9, 12, 15, 18, 21, 24, 27

4: 4, 8, 12, 16, 20, 24, 28, 32

2. Circle the first common multiple.

This is your LCD.

You try it! Find the Least Common Denominator of  $\frac{1}{2}$  and  $\frac{2}{3}$ . Answer: 6

Given:  $\frac{2}{3}$      $\frac{1}{4}$

Common multiples of the denominators:  
**12, 24, 36, 48, ...**

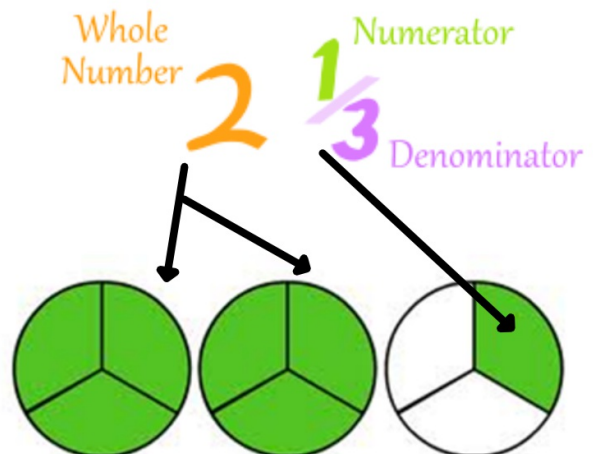
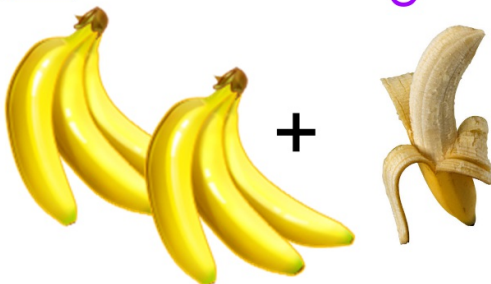
↑  
LCD

# Mixed number

$2\frac{1}{3}$

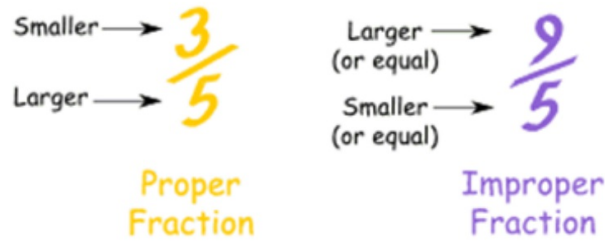
A mixed number is a whole number and a fraction combined into one "mixed" number.

2 wholes +  $\frac{1}{3}$  of a whole



# Improper fraction = A fraction greater than 1.

It is not a "bad" thing! Don't let the word "improper" fool you!



Example:  $\frac{7}{4}$  means:

Each whole is broke into 4 parts.

We have 7 parts.

Each part is a quarter ( $\frac{1}{4}$ ) of a whole

