Fractions

A fraction is a part of a whole

Slice a pizza, and you will have fractions:
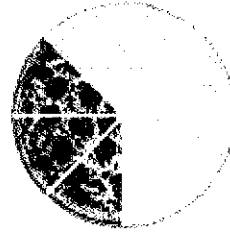
$^1/_2$ $^1/_4$ $^3/_8$

(One-Half)   **(One-Quarter)**   **(Three-Eighths)**
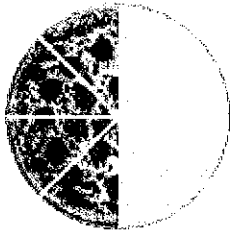
The top number tells how many slices you **have**
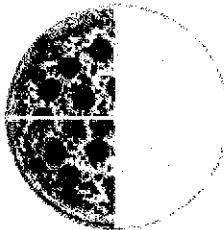The bottom number tells how many slices the pizza was **cut into**.

Equivalent Fractions

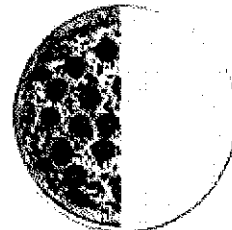Some fractions may look different, but are really the same, for example:

$^4/_8$ = $^2/_4$ = $^1/_2$

(Four-Eighths)   Two-Quarters)   (One-Half)

=   =

It is usually best to show an answer using the simplest fraction ($^1/_2$ in this case). That is called
Simplifying, or *Reducing* the Fraction

Numerator / Denominator

We call the top number the **Numerator**, it is the number of parts you have.
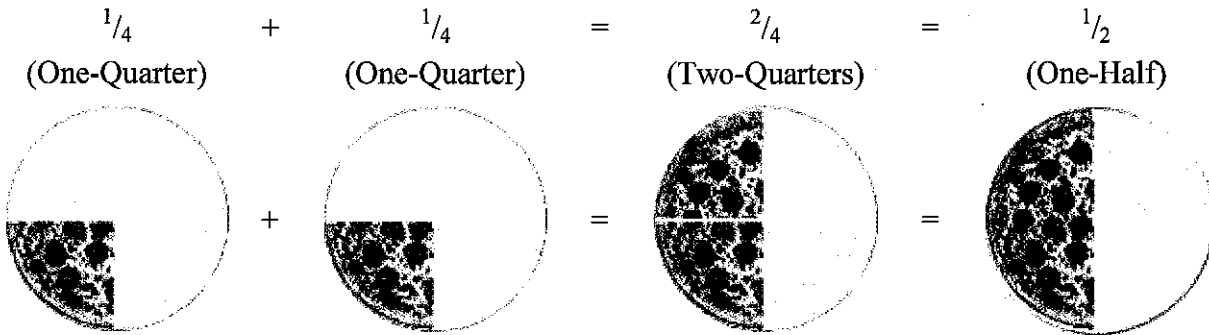We call the bottom number the **Denominator**, it is the number of parts the whole is divided into.
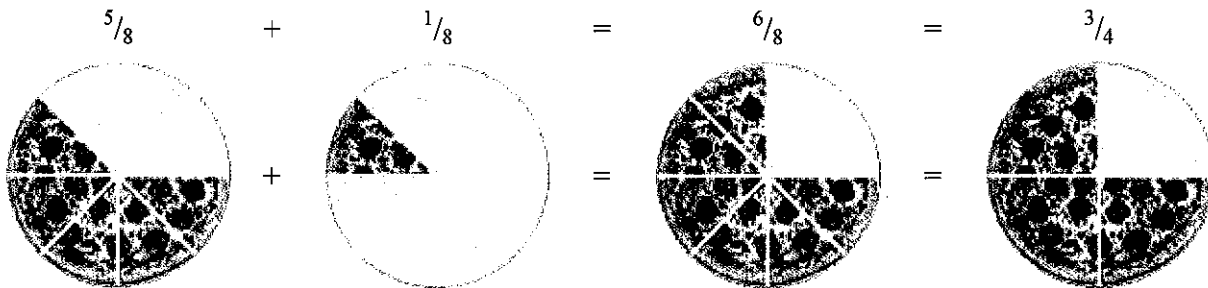
Numerator

You just have to remember those names! (If you forget just think "Down"-ominator)

Adding Fractions

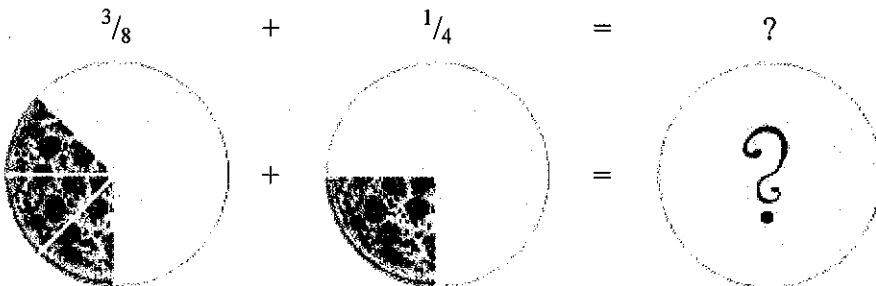You can add fractions easily if the bottom number (the *denominator*) is the same:

$$\frac{1}{4} \quad + \quad \frac{1}{4} \quad = \quad \frac{2}{4} \quad = \quad \frac{1}{2}$$

(One-Quarter)   (One-Quarter)   (Two-Quarters)   (One-Half)

Another example:

$$\frac{5}{8} \quad + \quad \frac{1}{8} \quad = \quad \frac{6}{8} \quad = \quad \frac{3}{4}$$

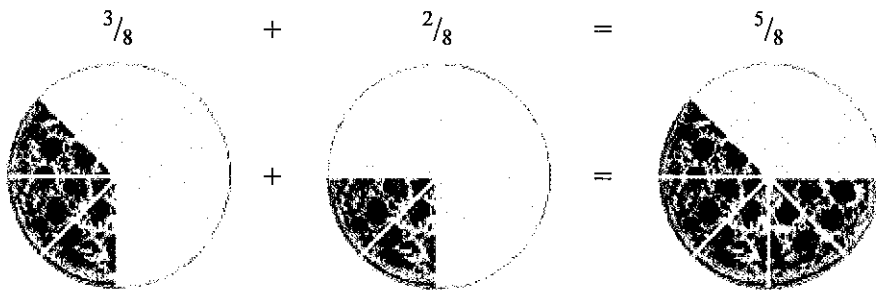# Adding Fractions with Different Denominators

But what if the **denominators** (the bottom numbers) are not the same? As in this example:

$$\frac{3}{8} \quad + \quad \frac{1}{4} \quad = \quad ?$$

You must *somehow* make the denominators the same.

In this case it is easy, because we know that $^1/_4$ is the same as $^2/_8$:

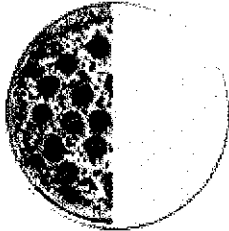$^3/_8$ + $^2/_8$ = $^5/_8$

But it can be harder to make the denominators the same, so you may need to use one of these methods (they both work, use whichever you prefer):

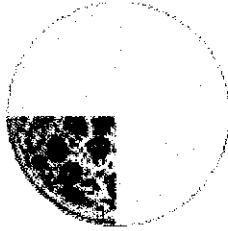- Least Common Denominator, or
- Common Denominator

Fractions

A fraction is a part of a whole

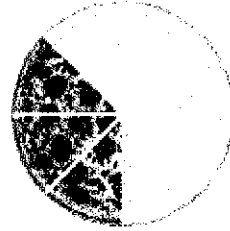**Slice a pizza, and you will have fractions:**

$^1/_2$ $^1/_4$ $^3/_8$

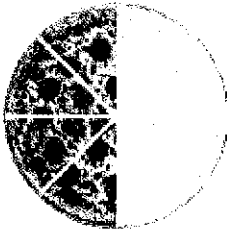**(One-Half)**   **(One-Quarter)**   **(Three-Eighths)**

The top number tells how many slices you **have**
The bottom number tells how many slices the pizza was **cut into**.

Equivalent Fractions
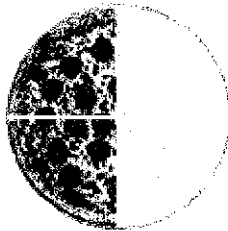
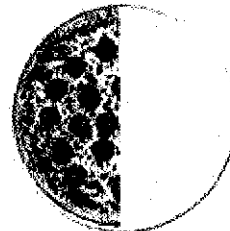Some fractions may look different, but are really the same, for example:

$^4/_8$ = $^2/_4$ = $^1/_2$

(Four-Eighths)   Two-Quarters)   (One-Half)

=   =

It is usually best to show an answer using the simplest fraction ($^1/_2$ in this case). That is called
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Numerator / Denominator

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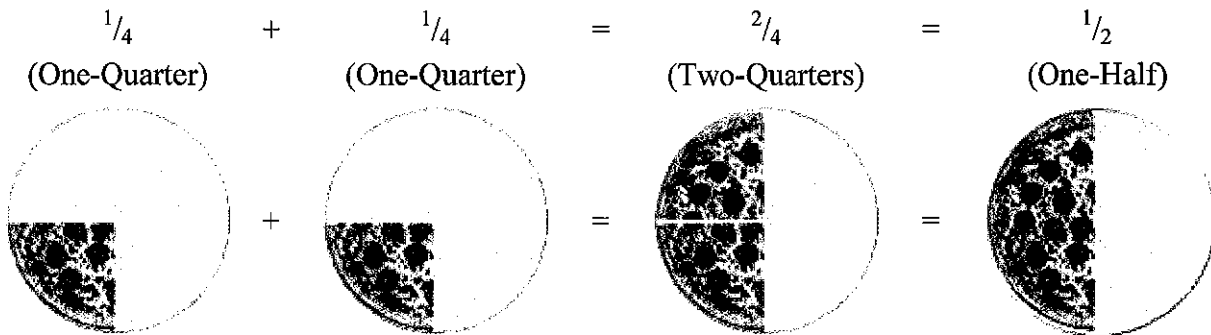We call the bottom number the **Denominator**, it is the number of parts the whole is divided into.
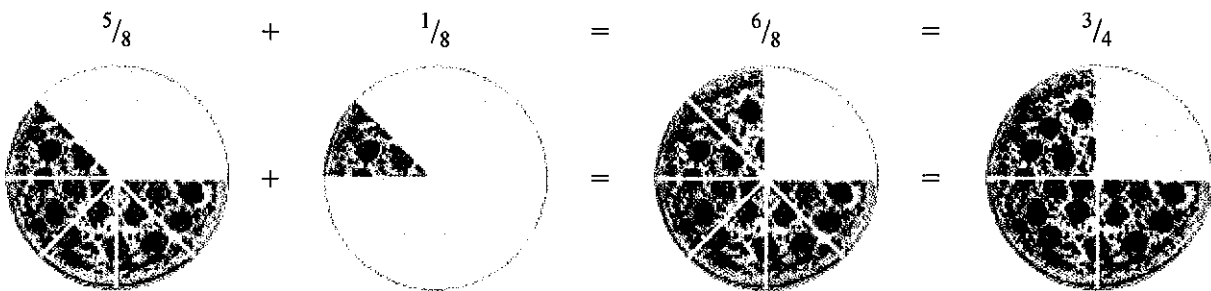
Numerator

You just have to remember those names! (If you forget just think "Down"-ominator)

Adding Fractions

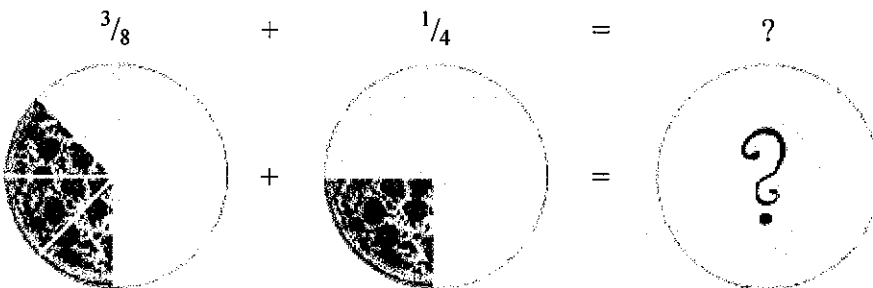You can add fractions easily if the bottom number (the *denominator*) is the same:

$^1/_4$	$+$	$^1/_4$	$=$	$^2/_4$	$=$	$^1/_2$
(One-Quarter)		(One-Quarter)		(Two-Quarters)		(One-Half)

Another example:

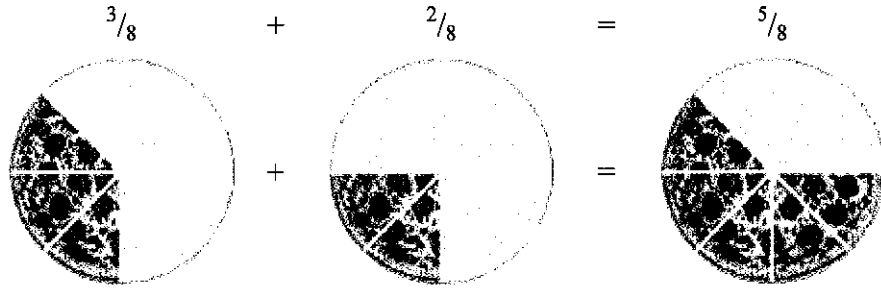| $^5/_8$	$+$	$^1/_8$	$=$	$^6/_8$	$=$	$^3/_4$

Adding Fractions with Different Denominators

But what if the **denominators** (the bottom numbers) are not the same? As in this example:

$^3/_8$	$+$	$^1/_4$	$=$	?

You must *somehow* make the denominators the same.

In this case it is easy, because we know that $^1/_4$ is the same as $^2/_8$:

$^3/_8$ + $^2/_8$ = $^5/_8$

But it can be harder to make the denominators the same, so you may need to use one of these methods (they both work, use whichever you prefer):

- Least Common Denominator, or
- Common Denominator