



## Year 5 - Fractions

### Key vocabulary

<b>Fraction</b>	A part of a whole.
<b>Numerator</b>	The top number in the fraction which shows how many parts you have.
<b>Denominator</b>	The bottom number in the fraction which shows how many equal parts the item is divided into.
<b>Proper Fraction</b>	A proper fraction is a fraction where the numerator is less than the denominator.
<b>Improper Fraction</b>	A fraction where the numerator is greater than the denominator.
<b>Mixed Number</b>	A number that is made up of a whole number and a fraction.

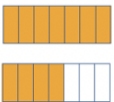
### Fractions, Decimals and Percentage Equivalents

Decimal	Percentage	Fraction
0.5	50%	$\frac{1}{2}$
0.25	25%	$\frac{1}{4}$
0.75	75%	$\frac{3}{4}$
0.2	20%	$\frac{1}{5}$
0.1	10%	$\frac{1}{10}$

### Basic Facts

#### Improper Fractions

Improper fractions and mixed numbers show fractions more than a whole.

$$\frac{11}{7} = 1 \frac{4}{7}$$


#### Equivalent Fractions

$$\frac{4}{8} = \frac{2}{4} = \frac{1}{2}$$

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



#### Proper Fractions

##### Proper Fractions

A fraction is a part of a whole.



$$\frac{3}{5}$$

numerator = number of parts referred to  
fractions bar = divided by / out of  
denominator = number of parts in whole

Fractions are divisions yet to be done...

$$\frac{1}{8} = 1 \div 8 = 0.125$$

#### Mixed Fractions



$$1 \frac{3}{4}$$

(one and three-quarters)

### Basic Facts

#### Adding and Subtracting Fractions

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

**First** make the bottom numbers (the denominators) the same

Multiply top and bottom of  $\frac{1}{3}$  by 4:

$$\frac{1 \times 4}{3 \times 4} + \frac{1}{4} = \frac{?}{?}$$

And multiply top and bottom of  $\frac{1}{4}$  by 3:

$$\frac{1 \times 4}{3 \times 4} + \frac{1 \times 3}{4 \times 3} = \frac{?}{?}$$

**Now** do the calculations:

$$\frac{4}{12} + \frac{3}{12} = \frac{4+3}{12} = \frac{7}{12}$$

#### Multiplying Fractions

**Step 1.** Multiply the top numbers:

$$\frac{1}{2} \times \frac{2}{5} = \frac{1 \times 2}{2 \times 5} = \frac{2}{10}$$

**Step 2.** Multiply the bottom numbers:

$$\frac{1}{2} \times \frac{2}{5} = \frac{1 \times 2}{2 \times 5} = \frac{2}{10}$$

**Step 3.** Simplify the fraction :

$$\frac{2}{10} = \frac{1}{5}$$