



# Year 6 - Fractions, Decimals and Percentages

## Key vocabulary

<b>Fraction</b>	A proportion or part of something. Can be represented in different ways
<b>Decimal</b>	Not a whole number, shows a value that is smaller than 1
<b>Percentage</b>	Parts out of 100
<b>Numerator</b>	Top part of the fraction which tells you how many parts you have
<b>Denominator</b>	Bottom part of the fraction, tells you how many parts make the whole
<b>Convert</b>	To exchange for the same value but in a different form
<b>Value</b>	Amount that something is worth
<b>Compare</b>	To examine the differences between numbers, quantities or values to decide if it is greater than, smaller than or equal to another quantity.
<b>Order</b>	To sort values in a particular pattern e.g. Smallest to Largest
<b>Equivalent Fraction</b>	Fractions which have the same value, even though they may look different.

## Finding Basic %

- 1% = ÷ by 100
- 5% = ÷ by 10 and then ÷ by 2
- 10% = ÷ by 10
- 25% = ÷ by 4
- 50% = ÷ by 2
- 75% = ÷ by 4 and then x by 3

## Finding % of an amount

- 35% of 200 = 70
- Find 10% =  $200 \div 10 = 20$
  - Find 5% =  $20 (10\%) \div 2 = 10$
- Now build your 35%
- 10% (20) x 3 = 60
  - Add 5% (10) = 70

## Converting Fraction to Percentages

$$\frac{15}{50} = \frac{30}{100} = 0.3 = 30\%$$

(Diagram: 15/50 with arrows pointing to 30/100, labeled with ×2 above and below)

$$\frac{60}{200} = \frac{30}{100} = 0.3 = 30\%$$

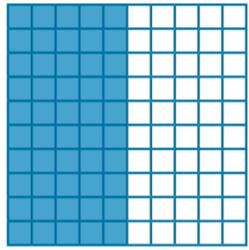
(Diagram: 60/200 with arrows pointing to 30/100, labeled with ÷2 above and below)

Ensure that you turn your fraction into hundredths

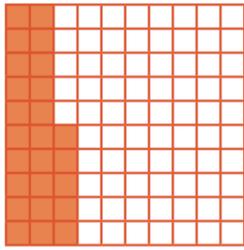
## Conversions

	$\frac{1}{2}$	0.5	50%
	$\frac{1}{3}$	0.333	33%
	$\frac{1}{4}$	0.25	25%
	$\frac{1}{5}$	0.2	20%
	$\frac{1}{8}$	0.125	12.5%
	$\frac{1}{10}$	0.1	10%

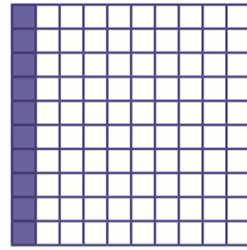
## Equivalent Fractions, Decimals and Percentages



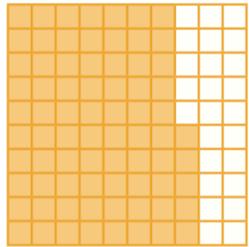
$$\frac{50}{100} = \frac{1}{2} = 0.5 = 50\%$$



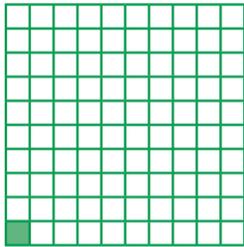
$$\frac{25}{100} = \frac{1}{4} = 0.25 = 25\%$$



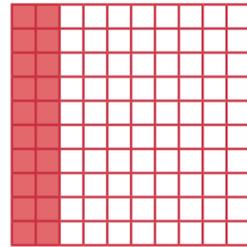
$$\frac{10}{100} = \frac{1}{10} = 0.1 = 10\%$$



$$\frac{75}{100} = \frac{3}{4} = 0.75 = 75\%$$



$$\frac{1}{100} = 0.01 = 1\%$$

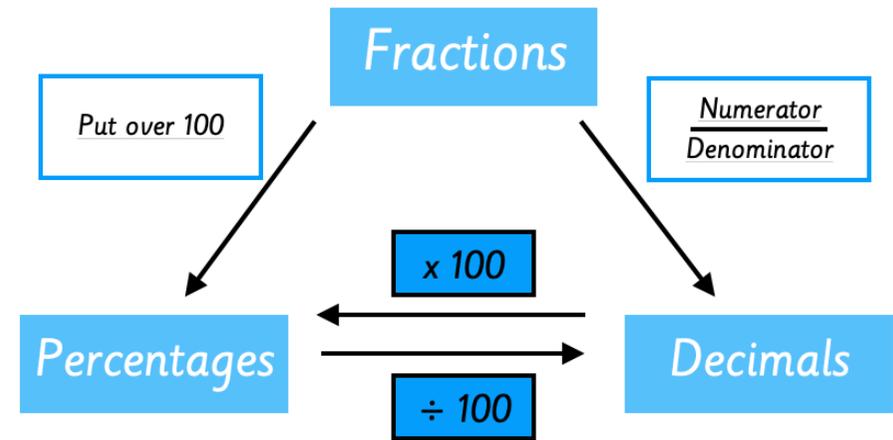


$$\frac{20}{100} = \frac{2}{10} = 0.2 = 20\%$$

## Useful Methods for FDP

Finding percentages	Converting fraction to decimals	Converting Fractions to percentages
$1\% = \div 100$ $10\% = \div 10$ $25\% = \div 4$ $50\% = \div 2$ $75\% = \div 4 \text{ then } \times 3$	Divide the numerator by the denominator. e.g. $\frac{1}{7} = .0.142$ $7 \overline{) 1.000}$	1. Turn into a decimal and multiply by 100. 2. Convert to equivalent e.g. $\frac{23}{25} = \frac{92}{100}$

## Conversions

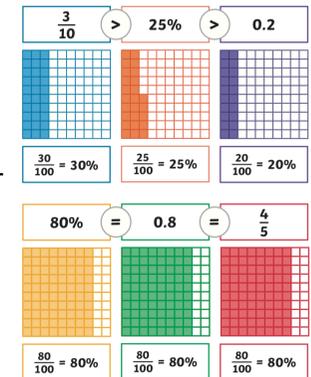


## Order and Compare FDP

To order and compare fractions, decimals and percentages you need to ensure that you change them all into the same form.

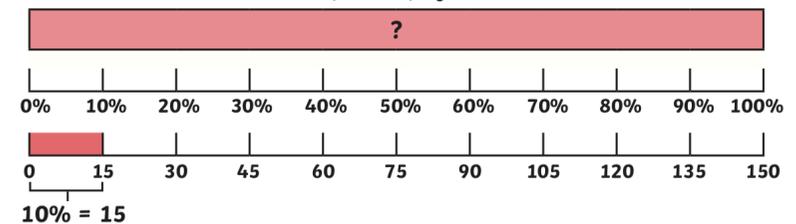
It is best to change them into either percentages or decimals

- > Greater than
- < Less than
- = Equal



## Missing Values

Whole value (100%) of bar model = ?



We know  $10\% = 15$      $10\% \times 10 = 100\%$  (the whole)    so  $15 \times 10 = 150$