

## Key Vocabulary

## Equivalents

percent

Percent means 'number of parts per hundred' or 'out of 100'. There are equivalences between simple fractions, decimals and percentages. We can convert fractions, decimals and percentages.

discount

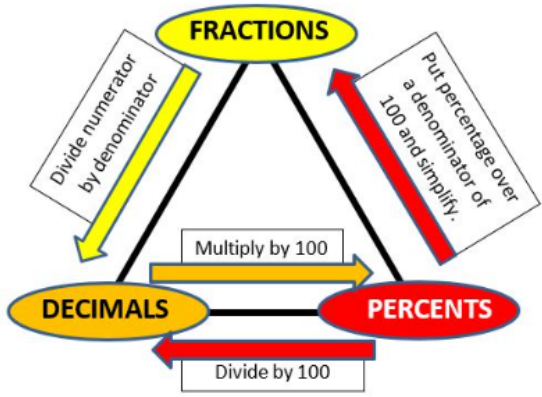


percentage	fraction	decimal
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30%	$\frac{3}{10}$	0.3
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to go from a fraction to a percentage we can **convert to a decimal** first

$\frac{3}{5} \rightarrow 0.6 \rightarrow 60\%$



equivalent



convert



compare



order

whole

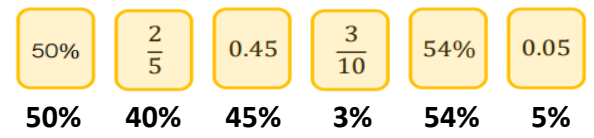
## Converting, ordering and comparing

order

When answering fraction, decimal and percentages order and compare questions, converting each number to the same form is the easiest way to compare them.

Step 1: change to the same number form

Order from smallest to largest:



decimal

Use <, > or = to complete the statements.

0.36 < 40%       $\frac{7}{10}$  > 0.07  
 0.4 > 25%      0.4 >  $\frac{1}{4}$

Use > < and = to compare

Order smallest to largest:

$\frac{3}{10}$ , 0.05,  $\frac{2}{5}$ , 0.45, 50%, 54%

Conversions must be **put back into the original form** to answer an ordering question

representation

context

bar model

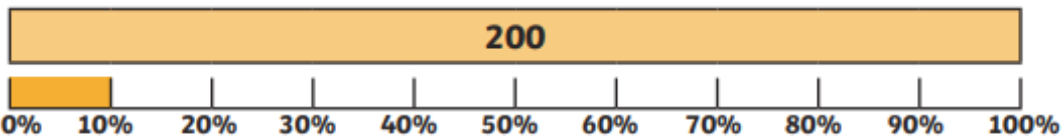
# Percentage of amounts

$$50\% = \frac{1}{2} \text{ so we can divide by 2}$$

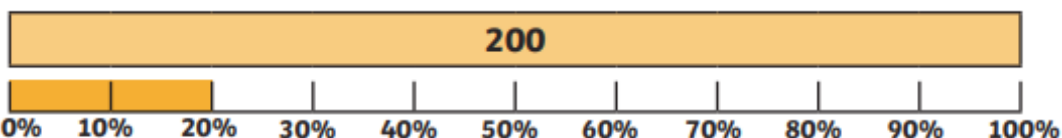
$$10\% = \frac{1}{10} \text{ so we can divide by 10}$$

$$25\% = \frac{1}{4} \text{ so we can divide by 4}$$

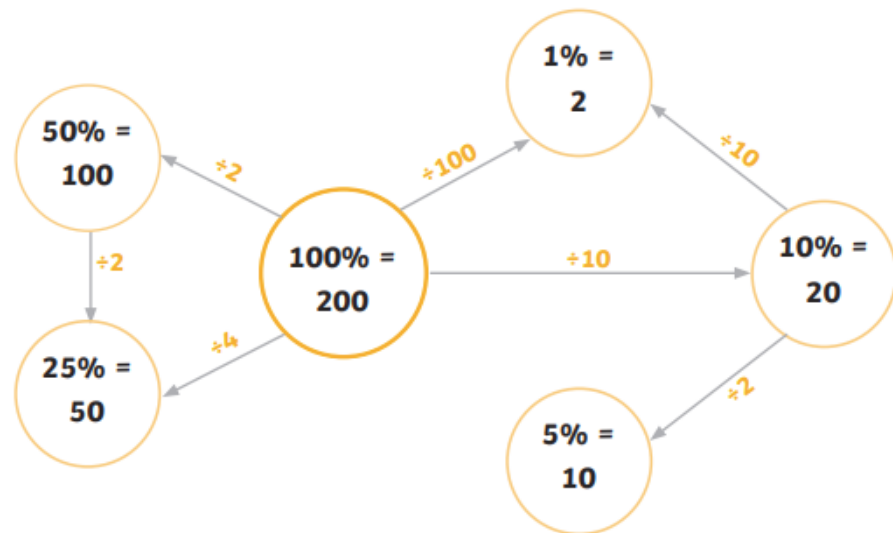
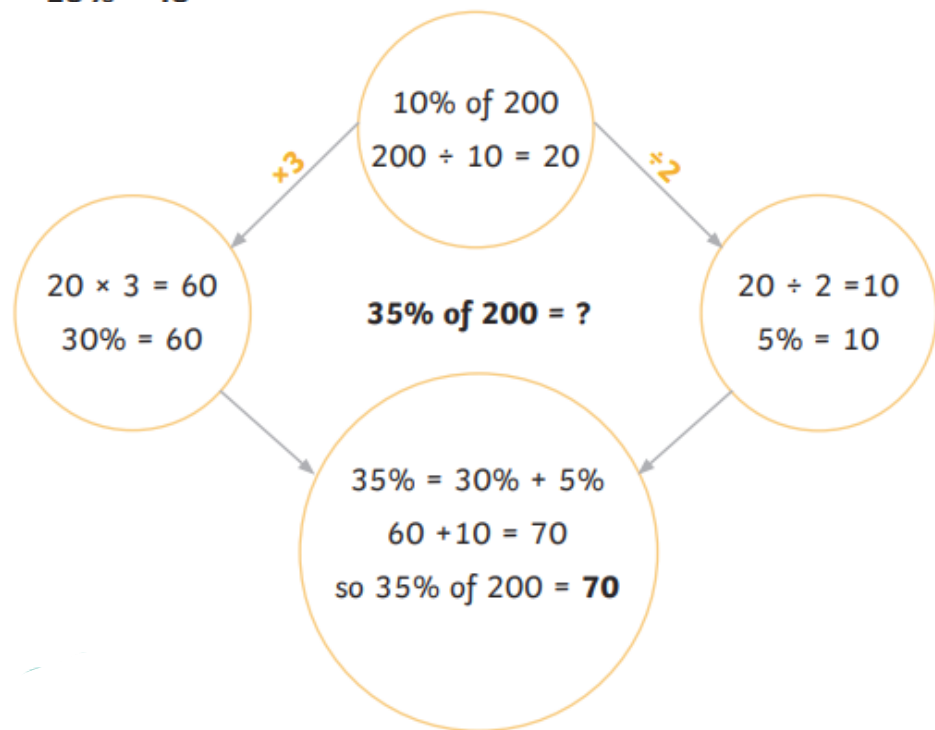
$$1\% = \frac{1}{100} \text{ so we can divide by 100}$$



$$10\% = 20$$



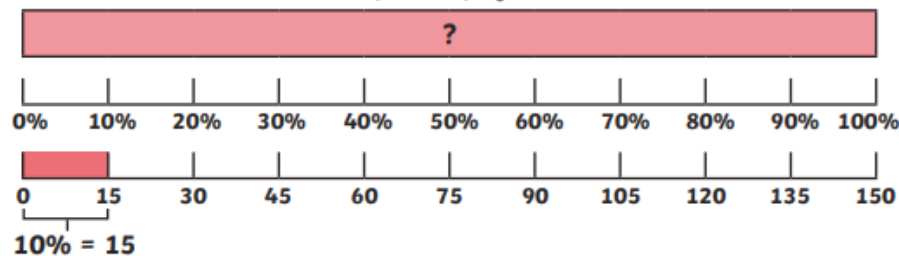
$$20\% = 40$$



## Missing values

We can use our understanding of percentages to find the missing whole or a missing percentage when the other values are given. It can be useful to draw a bar model to help see the relationship between the given percentage or amount and the whole.

Whole value (100%) of bar model = ?



$$10\% = 15 \quad 10\% \times 10 = 100\% \text{ so } 15 \times 10 = 150$$