

Number Facts: Year 6

Ratio and Proportion

Pupils should be taught to:

- solve problems involving the calculation of percentages (e.g. of measures) such as 15% of 360 and the use of percentages for comparison

Fractions

Pupils should be taught to:

- associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$)

recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

Measurement

Pupils should be taught to:

- convert between miles and kilometres
- recognise when it is possible to use formulae for area and volume of shapes

Geometry

Pupils should be taught to:

- illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius

Number Facts: Measure

- 1km approx. 0.62 miles
- Formula for area of a quadrilateral = length x width
- Formula for area of a triangle = $\frac{1}{2}$ base x height
- Formula for finding the volume of a cube = length x width x height

Number Facts: Fractions

$$\frac{1}{8} = 12.5\% = 0.125$$

$$\frac{1}{3} = 33.3\% = 0.333$$

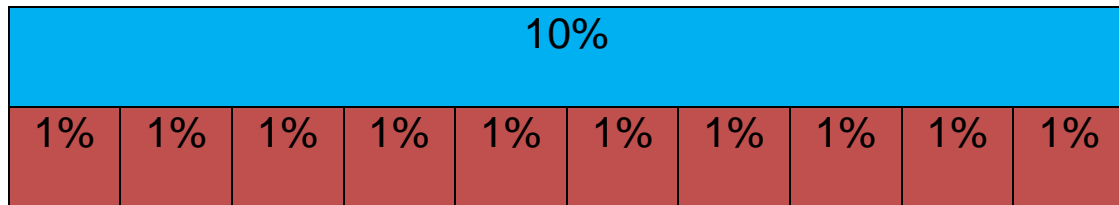
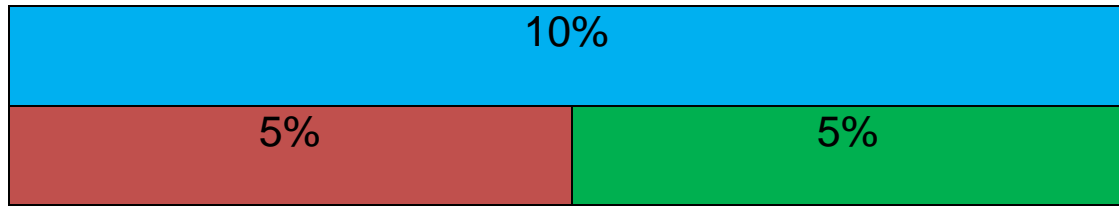
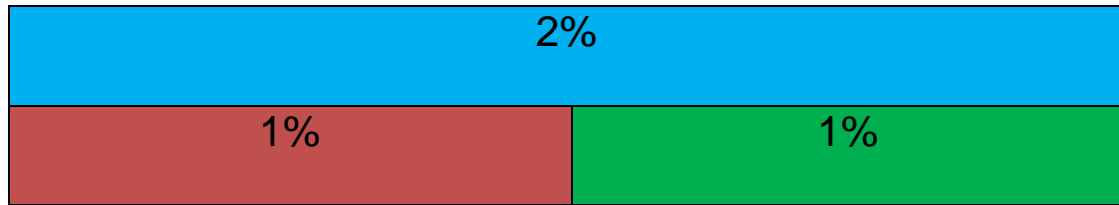
Number Facts: Ratio and Proportion

- To recognise related percentage facts.
For example:
If I know 1% then I can find 2% by doubling.
If I know 10% then I can find 5% by halving

Number Facts: Geometry

- Diameter = 2 x radius
- Radius = $\frac{1}{2}$ diameter

Images and mathematical models to support year 6 conceptual understanding underpinning the facts



1 whole = 1.0 = 100%									
$\frac{1}{2} = 0.5 = 50\%$					$\frac{1}{2}$				
$\frac{1}{4} = 0.25 = 25\%$		$\frac{1}{4}$			$\frac{1}{4}$		$\frac{1}{4}$		
$\frac{1}{8} = 0.125 = 12.5\%$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
$\frac{1}{3} = 0.333 = 33.33\%$			$\frac{1}{3}$			$\frac{1}{3}$			
$\frac{1}{5} = 0.2 = 20\%$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$	
$\frac{1}{10} = 0.1 = 10\%$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$