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

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Number Facts: Measure

- 1km = 0.621371 miles

- Formula for area of a quadrilateral = length x width

- Formula for area of a triangle = ½ 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
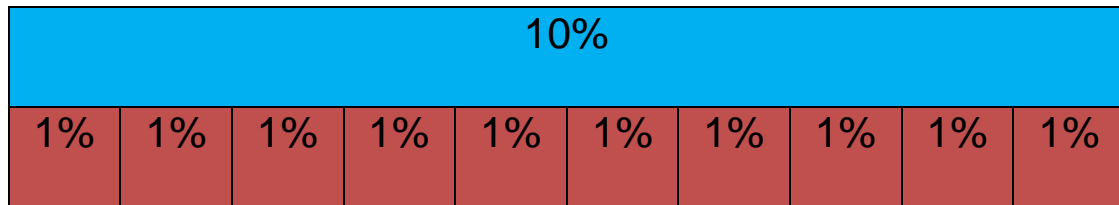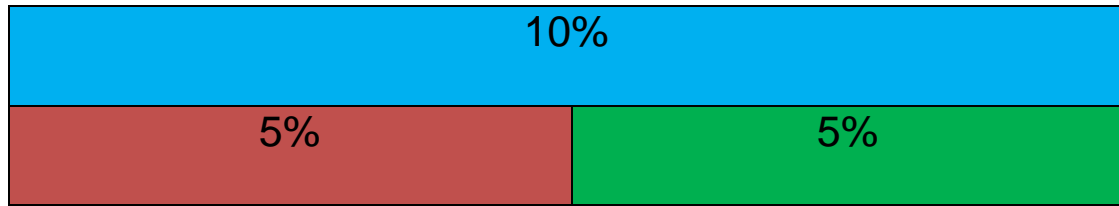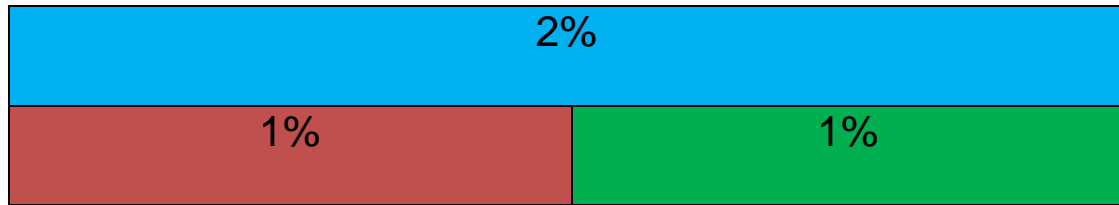
$\frac{1}{3}$ = 33.3% = 0.333

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 = ½ diameter

Hampshire County Council

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

2%	
1%	1%

10%	
5%	5%

10%									
1%	1%	1%	1%	1%	1%	1%	1%	1%	1%

1 whole = 1.0 = 100%							
½ = 0.5 = 50%				½			
¼ = 0.25 = 25%		¼		¼		¼	
$\frac{1}{8}$ = 0.125 = 12.5%	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
$\frac{1}{3}$ = 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%	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$