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. ³/_g)

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 = 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:

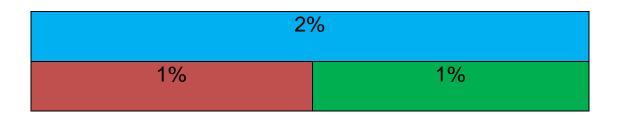
If I know 1% then I can find 2% by doubling.
If I know 10% then I can find 5% by halving

Number Facts: Geometry

- Diameter = 2 x radius
- Radius = ½ diameter



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





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

1 whole = $1.0 = 100\%$											
		1/2									
$\frac{1}{4} = 0$	=	1/2		1/4			1/4				
$\frac{1}{8} = 0.125$ = 12.5%	0.125 8 =		1/8	$\frac{1}{8}$ $\frac{1}{8}$			1 3	1 8	$\frac{1}{8}$		
$\frac{1}{3} = 0.333 = 33.33\%$ $\frac{1}{3}$ $\frac{1}{3}$											
$\frac{1}{5} = \frac{0.2}{20\%}$			1	$\frac{1}{5}$		$\frac{1}{5}$			1 5		
$\frac{1}{10} = 0.1 = 10\%$	1/10	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$		

