

Number Facts: Year 5

Multiplication and division

Pupils should be taught to:

- recall prime numbers up to 19
- multiply and divide numbers mentally drawing upon known facts
- multiply and divide whole numbers and those involving decimals by 10, 100 and 1000
- recognise and use square numbers

Number Facts: Multiplication and division

- To be able to find related facts from knowing the 12 x 12 multiplication and division facts.

For example...

$$12 \times 5 = 60 \quad 60 \div 5 = 12$$

$$1.2 \times 5 = 6.0 \quad 6 \div 5 = 1.2$$

$$5 \times 7 = 35 \quad 5 \times 0.7 = 3.5 \quad 5 \times 0.07 = 0.35$$

- Recognise all square numbers to 12 x 12.
- Recognise all prime numbers to 19 (2, 3, 5, 7, 11, 13, 17, 19)
- $10,000 \div 2 = 5000$
- $10,000 \div 4 = 2500$
- $10,000 \div 5 = 2000$
- $10,000 \div 10 = 1000$
- $10,000 \div 100 = 100$

Fractions

Pupils should be taught to:

- read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$)
- recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
- recognise the per cent symbol (%) and understand that per cent relates to "number of parts per hundred", and write percentages as a fraction with denominator hundred, and as a decimal fraction

Number Facts: Fractions

- $1 \div 100 = \frac{1}{100} = 0.01$ $2 \div 100 = \frac{2}{100} = 0.02$
- $3 \div 100 = \frac{3}{100} = 0.03$ $4 \div 100 = \frac{4}{100} = 0.04$
- $5 \div 100 = \frac{5}{100} = 0.05$ $6 \div 100 = \frac{6}{100} = 0.06$
- $7 \div 100 = \frac{7}{100} = 0.07$ $8 \div 100 = \frac{8}{100} = 0.08$
- $9 \div 100 = \frac{9}{100} = 0.09$ $10 \div 100 = \frac{10}{100} = \frac{1}{10} = 0.1$
- $10\% = 0.1 = \frac{1}{10} = \frac{10}{100} = \frac{100}{1000}$
- $50\% = 0.5 = \frac{1}{2} = \frac{5}{10} = \frac{50}{100}$
- $25\% = 0.25 = \frac{1}{4} = \frac{4}{10} = \frac{40}{100}$
- $75\% = 0.75 = \frac{3}{4} = \frac{75}{100}$
- $20\% = 0.2 = \frac{1}{5} = \frac{2}{10} = \frac{20}{100}$
- $40\% = 0.4 = \frac{4}{10} = \frac{40}{100}$

Measurement

Pupils should be taught to:

- convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)
- understand and use equivalences between metric units and common imperial units such as inches, pounds and pints

Geometry

Pupils should be taught to identify:

- angles at a point and one whole turn (total 360°)
- angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°)
- other multiples of 90°

Number Facts: Measurement

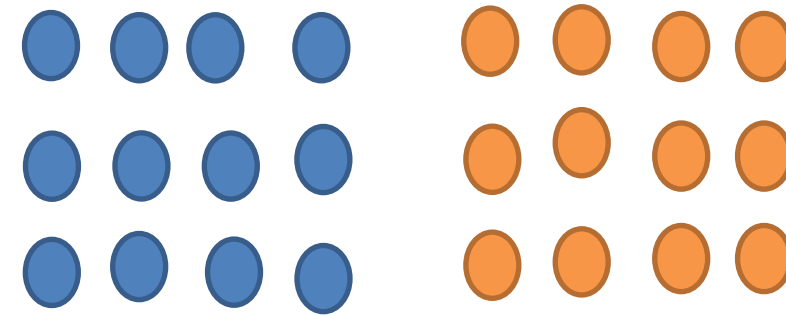
- $1 \text{ mm} = \frac{1}{10} \text{ cm}$ $1 \text{ mm} = \frac{1}{1000} \text{ m}$
- $1 \text{ kg} = \text{approx. } 2.2 \text{ lbs (2.20462 lbs)}$
- $1 \text{ l} = \text{approx. } 1.75 \text{ pints (1.75975 pints)}$
- $1 \text{ m} = \text{approx. } 40 \text{ inches (39.3701 inches)}$

Number Facts: Geometry

- To know complements to 360.
- Know complements to 180
- Recognise multiples of 90.
- Know that the angles in a triangle total 180 degrees
- Know that the angles in a quadrilateral total 360 degrees
- Know that the angles of a straight line total 180 degrees
- $360 \div 4 = 90$ $\frac{1}{4}$ of 360 = 90
- $360 \div 2 = 180$ $\frac{1}{2}$ of 360 = 180
- $\frac{3}{4}$ of 360 = 270

Images and mathematical models to support year 5 conceptual understanding underpinning the facts

Because I know that $8 \times 3 = 24$ I also know.....
 $80 \times 3 = 240$ $8 \times 30 = 240$
 $80 \times 30 = 2400$



Know complements to 90, 180 and 360

Because I know that $8 \times 3 = 24$ I also know.....
 $80 \times 3 = 240$ $8 \times 30 = 240$
 $80 \times 30 = 2400$

