Year 6

- read, write, order and compare numbers up to 10 million and determine the value of each digit
- short and long multiplication and division using numbers up to four digits; multiply one-digit numbers with up to two decimal places by whole numbers
- mental calculations, including with mixed operations and large numbers
- multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places
- add and subtract fractions with different denominators and mixed numbers
- multiply simple pairs of proper fractions and divide proper fractions by whole numbers
- recall and use equivalences between simple fractions, decimals and percentages
- solve problems involving ratio and proportion
- use algebra in terms of formula, sequences, variables and unknowns

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- recognise and use the formula for volume and area including parallelograms and triangles

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- illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
- recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
- draw and translate simple shapes on the coordinate plane, and reflect them in the axes

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- construct pie charts
- calculate and interpret the mean as an average

- **solve number problems and practical problems involving these ideas**

To support your child at home, Year 6 fluency objectives have been broken down into terms.

Autumn	Spring	Summer
$\frac{1}{3} \rightarrow \frac{2}{6}, \frac{3}{9}, \frac{4}{12}, \frac{5}{15}, \frac{6}{18}, \frac{7}{21}, \frac{8}{24}, \frac{9}{27}$	$8 \times 0.04 = 0.32 \quad 4 \times 0.08 = 0.32$	Convert mm to cm by dividing by 10 e.g. 423mm = 42.3cm
$\frac{2}{3} \rightarrow \frac{4}{6}, \frac{6}{9}, \frac{8}{12}, \frac{10}{15}, \frac{12}{18}, \frac{14}{21}, \frac{16}{24}, \frac{18}{27}$	$8 \times 0.06 = 0.48 \quad 6 \times 0.08 = 0.48$	Convert cm to metres by dividing by 100 e.g. 345cm = 3.45m
$\frac{1}{4} \rightarrow \frac{2}{8}, \frac{3}{12}, \frac{4}{16}, \frac{5}{20}, \frac{6}{24}, \frac{7}{28}, \frac{8}{32}, \frac{9}{36}$	$8 \times 0.07 = 0.56 \quad 7 \times 0.08 = 0.56$	Convert mm to metres by dividing by 1,000 e.g. 3245mm = 3.245m
$\frac{3}{4} \rightarrow \frac{6}{8}, \frac{9}{12}, \frac{12}{16}, \frac{15}{20}, \frac{18}{24}, \frac{21}{28}, \frac{24}{32}, \frac{27}{36}$	$8 \times 0.09 = 0.72 \quad 9 \times 0.08 = 0.72$	Convert g to kilograms by dividing by 1,000 e.g. 957g = 0.957kg
$\frac{1}{5} \rightarrow \frac{2}{10}, \frac{3}{15}, \frac{4}{20}, \frac{5}{25}, \frac{6}{30}, \frac{7}{35}, \frac{8}{40}, \frac{9}{45}$	$8 \times 0.12 = 0.96 \quad 12 \times 0.08 = 0.96$	Convert ml to litres by dividing by 1,000 e.g. 2670ml = 2.67 litres
$\frac{1}{6} \rightarrow \frac{2}{12}, \frac{3}{18}, \frac{4}{24}, \frac{5}{30}, \frac{6}{36}, \frac{7}{42}, \frac{8}{48}, \frac{9}{54}$	$6 \times 0.04 = 0.24 \quad 4 \times 0.06 = 0.24$	

Autumn	Spring	Summer
$0.03 + 0.97 = 1 \quad 0.96 + 0.04 = 1$	**Facts families** $7 \times 8 = 56 \quad 56 \div 8 = 7 \quad 56 \div 7 = 8$	Find 50% by dividing by 2 or halving e.g. 50% of 250 = 125 \quad 50% of 31 = 15.5
$0.12 + 0.88 = 1 \quad 0.83 + 0.17 = 1$	**Facts using multiples of 10 and 100** e.g. $80 \times 7 = 560 \quad 80 \times 70 = 5,600$	Find 10% by dividing by 10 e.g. 10% of 250 = 25 \quad 10% of 246 = 24.6
$0.21 + 0.79 = 1 \quad 0.74 + 0.26 = 1$	**Facts using decimals** e.g. $0.8 \times 7 = 5.6 \quad 0.08 \times 7 = 0.56$	Find 25% by dividing by 4 or halving 50% e.g. 25% of 80 = 40 \quad 25% of 124 = 31
$0.34 + 0.66 = 1 \quad 0.68 + 0.32 = 1$	**Facts using fractions** e.g. $\frac{1}{7}$ of 56 = 8 \quad $\frac{2}{7}$ of 56 = 16	Find 1% by dividing by 100 e.g. 1% of 500 = 5 \quad 1% of 240 = 2.4
$0.46 + 0.54 = 1 \quad 0.59 + 0.41 = 1$	**Facts by scaling up** e.g. $16 \times 7 = 112 \quad 8 \times 14 = 112$	