



Number and Place Value

- Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit
- Round any whole number to a required degree of accuracy
- Use negative numbers in context, and calculate intervals across zero
- Solve number and practical problems that involve all of the above.

Addition and subtraction Multiplication and division

- Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
- Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
- Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
- Perform mental calculations, including with mixed operations and large numbers
- Identify common factors, common multiples and prime numbers
- use their knowledge of the order of operations to carry out calculations involving the four operations
- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
- solve problems involving addition, subtraction, multiplication and division
- Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

Fractions (including decimals and percentages)

- Use common factors to simplify fractions; use common multiples to express fractions in the same denomination
- Compare and order fractions, including fractions > 1
- Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
- Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]
- Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]
- Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$]
- Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
- Multiply one-digit numbers with up to two decimal places by whole numbers
- Use written division methods in cases where the answer has up to two decimal places
- Solve problems which require answers to be rounded to specified degrees of accuracy
- Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts

Ratio and proportion

- Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
- Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison
- Solve problems involving similar shapes where the scale factor is known or can be found
- Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

Number Skills

Number skills which children need to know before starting year 6. Practice these skills over the summer ready for Year 6.

Year 5 number skills	My child can
Count forward and backwards with positive and negative numbers, including through zero.	
Count forward and backwards in steps of powers to 10 for any given number to 1,000,000	
Count prime numbers up to 19	
Know all multiplication and corresponding division facts to 12×12	
Square and cubed numbers	
Convert equivalent fractions to decimals and percentages	
Know decimal compliments to 1 (2 dp, e.g., $0.76 + 0.24$)	
Know decimal compliments to 10 (1dp, e.g., $6.2 + 3.8$)	
Know what must be added to any 4-digit number to make the next multiple of 1000 (e.g. $4678 + 322 = 5000$)	
Know what must be added to any 1d.p number to make the next whole number (e.g. $4.8 + 0.2 = 5$)	
Doubles and halves of 1.d.p decimals to 10 (e.g. double 3.4, half of 5.6).	
Know all square numbers to 12×12	
Know all prime numbers to 19.	
FDP equivalents of halves, quarters, tenths, hundredths, thirds and fifths (e.g. $1/5 = 2/10 = 0.2 = 20\%$)	
Factor pairs for numbers to 100.	

From September, children will practise the following basic number and counting skills. They need to know them by heart and be able to apply them to their maths work. Children need to practise these facts at home to reinforce learning from school to help them become fluent.

Year 6 number skills
Compliments to 1 in 1/100's e.g. $0.81 + 0.19$
Count forward and backwards with positive and negative numbers, including through zero.
Count forward and backwards in steps of powers to 10 for any given number to 1,000,000
Multiply and divide mentally any number drawing upon known facts
Square and cubed numbers (to $10 \times 10 \times 10$)
Prime numbers to 100
Prime factors of numbers to 100
Convert equivalent fractions to decimals and percentages
Find percentages of amounts using tables knowledge
FDP equivalents of halves, quarters, tenths, hundredths, thirds and fifths, sixths and eighths (ninths and elevenths if possible) (e.g. $1/5 = 2/10 = 0.2 = 20\%$)
Doubles and halves of 2.d.p decimals to 100 (e.g. double 18.45, half of 6.48)
Know decimal compliments for all whole numbers to 10 - 2.d.p (e.g. $7.26 + 0.74 = 8$)