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# Mathematics

## Year 6

### Chapter 1 Positive and negative whole numbers

- Place value
- The number line
- Counting
- The integers
- Review questions

### Chapter 2 Addition and subtraction

- Mental strategies for addition
- The standard addition algorithm
- Mental strategies for subtraction
- Subtraction algorithms
- Working with larger numbers
- Review questions

### Chapter 3 Multiples and factors

- Multiples and products
- Factors and primes
- Review questions

### Chapter 4 Multiplication and division

- Mental strategies for multiplication
- Breaking a multiplication apart
- The multiplication algorithm
- Connecting multiplication and division
- The long division algorithm
- The short division algorithm
- Tests for divisibility
- Review questions
- Flip numbers

### Chapter 5 Length, perimeter, area and volume

- Length
- Converting length measurements
- Calculating perimeter

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- Area
  - Area of composite shapes
  - Area of triangles
  - Hectares
  - Volume
  - Liquid measure
  - Review questions

### Chapter 6 Fractions

- What is a fraction?
- Fractions on the number line
- Area model for fractions
- Equivalent fractions and simplest form
- Comparing fractions
- Improper fractions and mixed numbers
- Review questions

### Chapter 7 Fraction arithmetic

- Adding fractions with the same denominator
- Adding fractions with different denominators
- Subtraction of fractions
- Multiplying fractions: Taking a fraction of a number
- Multiplying fractions: A fraction of a fraction
- Fractions and division
- Dividing by a fraction
- Review questions

### Chapter 8 Decimals

- Decimal numbers
- Comparing decimal numbers
- Adding decimals
- Subtracting decimals
- Multiplying decimals by 10, 100 or 1000
- Dividing decimals by 10, 100 or 1000
- Multiplying decimals by a whole number
- Division and decimals
- Multiplying whole numbers by decimals
- Rounding decimals
- Applying decimal understanding
- Review questions

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### Chapter 9 Percentages

- Converting fractions to percentages
- Decimals and percentages
- Percentage 'of' a quantity
- Review questions
- Challenge: Calendar puzzle

### Chapter 10 Lines and angles

- Lines and angles
- Using a protractor
- Finding unknown angles
- Review questions
- Challenge: Fractals

### Chapter 11 Two-dimensional shapes

- Triangles
- Quadrilaterals
- The rhombus
- Pentagons
- Circles
- Review questions

### Chapter 12 Three-dimensional objects

- Polyhedron
- Prisms, cylinders and pyramids
- Nets of three-dimensional objects
- Review questions

### Chapter 13 Measurement

- Mass
- Calculating different masses
- Reading and recording time
- Temperature
- Review questions

### Chapter 14 Maps and coordinates

- Maps and grid references
- The Cartesian plane
- Review questions

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**Chapter 15 Data**

- Using tables
- Mode, median and mean
- Dot plots
- Column graphs
- Line graphs
- Pie charts
- The statistical data investigation process
- Probability
- Review questions

**Chapter 16 Algebra**

- Finding an unknown
- Pro-numerals
- Number patterns

**Chapter 17 Symmetry and transformation**

- Symmetry of two-dimensional shapes
- Transformation and tessellation

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