Number theory

A.1 Factors

A.2 Divisibility rules

A.3 Prime or composite

A.4 Prime factorisation

A.5 Highest common factor

A.6 Lowest common multiple

A.7 HCF and LCM: word problems

A.8 Classify numbers

Integers

B.1 Integers on number lines

B.2 Graph integers on horizontal and vertical number lines

B.3 Compare and order integers

Operations with integers

C.1 Integer addition and subtraction rules

C.2 Add and subtract integers using counters

C.3 Add and subtract integers

C.4 Add and subtract three or more integers

C.5 Add and subtract integers: word problems

C.6 Integer multiplication and division rules

C.7 Multiply and divide integers

C.8 Evaluate numerical expressions involving integers

Rational numbers

D.1 Identify rational and irrational numbers

D.2 Write fractions in lowest terms

D.3 Lowest common denominator

D.4 Round decimals and mixed numbers

D.5 Convert between decimals and fractions or mixed numbers

D.6 Compare rational numbers

D.7 Put rational numbers in order

Operations with rational numbers

E.1 Reciprocals and multiplicative inverses

E.2 Add and subtract rational numbers

E.3 Add and subtract rational numbers: word problems

E.4 Apply addition and subtraction rules

E.5 Multiply and divide rational numbers

E.6 Multiply and divide rational numbers: word problems

E.7 Apply multiplication and division rules

E.8 Apply addition, subtraction, multiplication and division rules

E.9 Evaluate numerical expressions involving rational numbers

Exponents and roots

F.1 Understanding exponents

F.2 Evaluate exponents

F.3 Solve equations with variable exponents

F.4 Exponents with negative bases

Scientific notation

Ratios, rates and proportions

H.1 Understanding ratios

H.2 Identify equivalent ratios

H.3 Write an equivalent ratio

H.4 Equivalent ratios: word problems

H.5 Unit rates

H.6 Compare ratios: word problems

H.7 Solve proportions: word problems

H.8 Do the ratios form a proportion?

H.9 Do the ratios form a proportion: word problems

H.10 Solve proportions

H.11 Estimate population size using proportions

H.12 Scale drawings: word problems

H.13 Rate of change

H.14 Constant rate of change

Proportional relationships

I.1 Find the constant of proportionality from a table

I.2 Write equations for proportional relationships from tables

I.3 Identify proportional relationships by graphing

I.4 Find the constant of proportionality from a graph

I.5 Write equations for proportional relationships from graphs

I.6 Identify proportional relationships

I.7 Graph proportional relationships

I.8 Interpret graphs of proportional relationships

I.9 Write and solve equations for proportional relationships

Percents

J.1 Convert between percents, fractions and decimals

J.2 Compare percents to fractions and decimals

J.3 Find what percent one number is of another

J.4 Find what percent one number is of another: word problems

J.5 Estimate percents of numbers

J.6 Percents of numbers and money amounts

J.7 Percents of numbers: word problems

J.8 Compare percents of numbers

J.9 Solve percent equations

J.10 Percent of change

J.11 Percent of change: word problems

Consumer maths

K.1 Price lists

K.2 Unit prices

K.3 Unit prices: find the total price

K.4 Percent of a number: VAT, discount and more

K.5 Find the percent: discount and mark-up

K.6 Sale prices: find the original price

K.7 Multi-step problems with percents

K.8 Estimate tips

K.9 Simple interest

K.10 Compound interest

Units of measurement

L.1 Convert rates and measurements: metric units

L.2 Metric mixed units

L.3 Convert square and cubic units of length

L.4 Convert between cubic metres and litres

L.5 Precision

Problem solving

M.1 Multi-step word problems

M.2 Guess-and-check word problems

M.3 Use Venn diagrams to solve problems

M.4 Elapsed time word problems

Coordinate plane

N.1 Points on a coordinate plane

N.2 Quadrants and axes

N.3 Follow directions on a coordinate plane

Two-dimensional figures

O.1 Identify and classify polygons

O.2 Classify triangles

O.3 Identify trapeziums

O.4 Classify quadrilaterals

O.5 Graph triangles and quadrilaterals

Congruence and similarity

Constructions

Q.1 Construct the midpoint or perpendicular bisector of a segment

Q.2 Construct an angle bisector

Q.3 Construct a congruent angle

Q.4 Construct a perpendicular line

Q.5 Construct parallel lines

Q.6 Construct an equilateral triangle or regular hexagon

Pythagoras' theorem

R.1 Pythagoras' theorem: find the length of the hypotenuse

R.2 Pythagoras' theorem: find the missing leg length

R.3 Pythagoras' theorem: find the perimeter

R.4 Pythagoras' theorem: word problems

R.5 Converse of Pythagoras' theorem: is it a right triangle?

Three-dimensional figures

S.1 Parts of three-dimensional figures

S.2 Nets of three-dimensional figures

S.3 Front, side and top view

S.4 Base plans

S.5 Similar solids

Geometric measurement

T.1 Perimeter

T.2 Area

T.3 Area between two shapes

T.4 Area and perimeter: word problems

T.5 Circles, semicircles and quarter circles

T.6 Circles: word problems

T.7 Volume of prisms and cylinders

T.8 Surface area of prisms and cylinders

T.9 Volume and surface area of similar solids

T.10 Perimeter, area and volume: changes in scale

Number sequences

U.1 Identify arithmetic and geometric sequences

U.2 Arithmetic sequences

U.3 Geometric sequences

U.4 Number sequences: mixed review

U.5 Number sequences: word problems

U.6 Evaluate variable expressions for number sequences

U.7 Write variable expressions for arithmetic sequences

Expressions and properties

V.1 Write variable expressions

V.2 Write variable expressions from diagrams

V.3 Write variable expressions: word problems

V.4 Evaluate one-variable expressions

V.5 Evaluate multi-variable expressions

V.6 Evaluate absolute value expressions

V.7 Evaluate radical expressions

One-variable equations

Monomials and polynomials

X.1 Identify monomials

X.2 Model polynomials with algebra tiles

X.3 Add and subtract polynomials using algebra tiles

X.4 Add and subtract polynomials

X.5 Add polynomials to find perimeter

X.6 Multiply monomials

X.7 Divide monomials

X.8 Multiply and divide monomials

X.9 Powers of monomials

X.10 Square and cube roots of monomials

X.11 Multiply polynomials using algebra tiles

X.12 Multiply polynomials

X.13 Multiply polynomials to find area

Factorising

Y.1HCF of monomials

Y.2 Factorise out a monomial

Y.3 Factorise quadratics with leading coefficient 1

Y.4 Factorise quadratics with other leading coefficients

Y.5 Factorise quadratics: special cases

Y.6 Factorise quadratics using algebra tiles

Y.7 Factorise by grouping

Y.8 Factorise polynomials

Data and graphs

Statistics

Probability

BB.3 Experimental probability

BB.4 Make predictions

BB.5 Compound events: find the number of outcomes

BB.6 Counting principle