

The questions increase in complexity throughout the paper and encourage the use of higher-order thinking skills.

INTRODUCTORY PAPER

NUMBER & ARITHMETIC

ALGEBRA & PATTERNS

MEASURES & UNITS

SPACE & GEOMETRY

CHANCE & DATA

QUESTIONS MAY REQUIRE STUDENTS TO:

NUMBER

- count, order and compare whole numbers to 100
- skip by 2s, 5s, and 10s
- understand place value of whole numbers to 100 and position numbers on the number line
- recognise halves and wholes.

PATTERNS

- continue simple linear patterns with numbers and shapes

MEASURES

- informally measure and compare mass, length, area, volume and capacity
- measure and compare time in hours, days, weeks, months and years

SPACE

- give and follow directions
- identify relative position on a picture or map

CHANCE

- give simple estimates of probability in terms of what will happen, might happen and won't happen

ARITHMETIC

- use the four operations with single digits using stimulus for multiplication and division
- add and subtract by counting on, partitioning and rearranging
- solve number problems involving whole numbers to 100

PRE-ALGEBRA

- solve simple number puzzles expressed in words or symbols

UNITS

- no formal units at this level

SHAPE

- recognise and classify basic shapes and solids using obvious features
- identify shapes that are the same, similar or different

DATA

- complete a basic table
- read a basic table with frequencies and tallies
- read a picture graph

ALGEBRA

not tested at this level.

MEASUREMENT

- read analog and digital clocks to the half hour

GEOMETRY

not tested at this level.



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PAPER A

NUMBER & ARITHMETIC

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QUESTIONS MAY REQUIRE STUDENTS TO:

NUMBER

- count, order and compare whole numbers to 1000
- place value of whole numbers to 1000
- skip by 2s, 3s, 5s and 10s
- order and compare halves, quarters and eighths

PATTERNS

- continue simple linear patterns with numbers and shapes
- identify missing elements in a pattern

MEASURES

- informally measure and compare mass, length, area, volume and capacity
- order months and seasons
- read a calendar

SPACE

- give and follow directions
- identify relative position on a picture or map
- identify image after one-step flip, slide and half or quarter turns

CHANCE

- give simple estimates of probability in terms of likelihood

ARITHMETIC

- multiply and divide by single digits using repeated addition, arrays or groups
- solve simple addition and subtraction problems

PRE-ALGEBRA

- solve simple number puzzles expressed in words or symbols
- complete number sentences involving addition and subtraction

UNITS

- no formal units at this level

SHAPE

- describe 2-D and 3-D shapes
- identify shapes or solids that are the same or different

DATA

- classify data
- interpret lists, tables and picture graphs
- complete a basic table

ALGEBRA

not tested at this level.

MEASUREMENT

- read analog and digital clocks to the quarter hour

GEOMETRY

not tested at this level.



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PAPER B

NUMBER & ARITHMETIC

ALGEBRA & PATTERNS

MEASURES & UNITS

SPACE & GEOMETRY

CHANCE & DATA

QUESTIONS MAY REQUIRE STUDENTS TO:

NUMBER

- count, order and compare whole numbers to 10 000
- understand place value of whole numbers to 10 000
- recognise odd and even numbers

PATTERNS

- identify and describe patterns in numbers, shapes and objects
- identify and describe patterns in sequences

MEASURES

- estimate, order, measure and compare mass, length, and capacity

SPACE

- identify pathways and interpret grid maps for relative position
- identify axes of symmetry

CHANCE

- count the number of arrangements of sets of objects and events

ARITHMETIC

- solve problems involving unit fractions with denominators of 2, 3, 5 and 10
- multiply and divide by 2, 3, 5 and 10
- use informal factors and multiples of whole numbers to solve problems
- add and subtract to 100

PRE-ALGEBRA

- complete number sentences involving the four operations

UNITS

- use familiar metric units such as cm, m, km, g, kg, L and mL

SHAPE

- identify nets and elevations of 3-D shapes

DATA

- read and interpret bar charts, a range of common graphs and two-way tables

ALGEBRA

not tested at this level.

MEASUREMENT

- read analog and digital clocks
- calculate areas and perimeters using a grid

GEOMETRY

- recognise angles as measures of turn
- order and compare angles

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PAPER C

NUMBER & ARITHMETIC

ALGEBRA & PATTERNS

MEASURES & UNITS

SPACE & GEOMETRY

CHANCE & DATA

QUESTIONS MAY REQUIRE STUDENTS TO:

NUMBER

- count, order and compare numbers from 0.01 to 100 000
- understand place value of numbers from 0.01 to 100 000
- count by halves, thirds, quarters, tenths and hundredths

PATTERNS

- sequence numbers in multiples of 2 to 10

MEASURES

- use scaled instruments to measure and compare quantities, temperatures and lengths

SPACE

- use scales, legends and directions to interpret maps
- complete symmetrical patterns

CHANCE

- order likelihood of events
- recognise complementary and independent events

ARITHMETIC

- solve problems involving equivalent fractions
- convert decimals to fractions
- use all number facts to 100

PRE-ALGEBRA

- solve complex number puzzles expressed in words

UNITS

- select appropriate metric units
- choose appropriate order of magnitude
- convert time

SHAPE

- informally compare areas of composite or irregular shapes

DATA

- select and interpret data appropriate display
- interpret line graphs

ALGEBRA

not tested at this level.

MEASUREMENT

- compare areas and perimeters using a grid
- solve time problems involving am and pm

GEOMETRY

compare angles less than 180°

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PAPER D

NUMBER & ARITHMETIC

ALGEBRA & PATTERNS

MEASURES & UNITS

SPACE & GEOMETRY

CHANCE & DATA

QUESTIONS MAY REQUIRE STUDENTS TO:

NUMBER

- round numbers
- compare and order fractions and decimals and locate them on the number line

PATTERNS

- continue and describe patterns involving fractions, decimals and whole numbers

MEASURES

- convert metric units of length

SPACE

- connect 3-D objects with 2-D views and nets
- use grid reference and directional language
- identify line and rotational symmetry

CHANCE

- list sample space
- represent probabilities as fractions
- recognise probabilities lie from 0 to 1

ARITHMETIC

- use factors and multiples to solve problems
- solve problems involving long multiplication and division with remainders
- solve problems involving fractions, mixed numerals and whole numbers
- estimate products

PRE-ALGEBRA

- complete equivalent number sentences involving all four operations

UNITS

- choose and use appropriate metric units

SHAPE

DATA

- interpret and compare column graphs, dot plots and tables

ALGEBRA

not tested at this level.

MEASUREMENT

- calculate areas and perimeters of rectangles
- convert 24-hour time

GEOMETRY

- measure and compare angles
- solve problems involving parallel and perpendicular lines

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PAPER E

NUMBER & ARITHMETIC

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CHANCE & DATA

QUESTIONS MAY REQUIRE STUDENTS TO:

NUMBER

- identify and apply properties of prime, composite, square and triangular numbers
- convert between fractions, decimals and percentages

PATTERNS

- continue a pattern of related fractions

MEASURES

- convert metric units of area and volume

SPACE

- apply combinations of transformations to an image
- use the cartesian plane to represent points

CHANCE

- represent probabilities as decimals and percentages
- compare experimental and expected frequencies

ARITHMETIC

- order integers
- solve problems involving order of operations including decimals and fractions
- add and subtract related fractions
- find fractions of whole numbers
- solve percentage problems such as discounts

PRE-ALGEBRA

- complete equivalent number sentences involving order of operations

MEASUREMENT

- calculate areas and perimeters of composite shapes including triangles
- interpret timetables

GEOMETRY

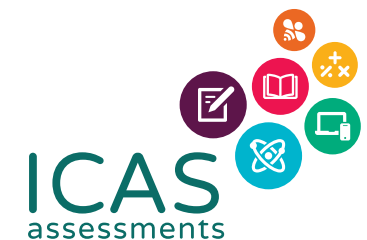
- apply angle properties including complementary, supplementary, vertically opposite angles and angles at a point
- solve problems involving the angle sum of a triangle

DATA

- interpret and compare double column graphs
- interpret sector graphs

ALGEBRA

not tested at this level.



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PAPER F

NUMBER & ARITHMETIC

ALGEBRA & PATTERNS

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CHANCE & DATA

QUESTIONS MAY REQUIRE STUDENTS TO:

NUMBER

- use index notation
- represent numbers as product of primes
- find squares and square roots
- compare and order integers and unrelated fractions
- round decimals

PATTERNS

- continue patterns involving powers, integers and unrelated fractions

MEASURES

SPACE

- use simple bearings
- plot and identify co-ordinates in all four quadrants

CHANCE

ARITHMETIC

- use order of operations with integers and unrelated fractions
- solve ratio problems
- express one quantity as a percentage or fraction of another

PRE-ALGEBRA

MEASUREMENT

- use formulae to calculate areas of triangles and parallelograms
- calculate volumes of rectangular prisms

SHAPE

- classify and use properties of triangles and quadrilaterals

DATA

- interpret and compare stem and leaf plots, and dot plots
- calculate mean, median, mode and range

ALGEBRA

- create and evaluate algebraic equations using substitution
- interpret authentic graphs and solve linear equations
- simplify expressions

GEOMETRY

- calculate angles between transversals and parallel lines
- use angle sum of quadrilaterals to solve problems

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PAPERS G & H

NUMBER & ARITHMETIC

ALGEBRA & PATTERNS

MEASURES & UNITS

SPACE & GEOMETRY

CHANCE & DATA

QUESTIONS MAY REQUIRE STUDENTS TO:

NUMBER

- apply index laws involving positive and zero indices
- convert terminating and recurring decimals to fractions

PATTERNS

- continue patterns involving recurring decimals

MEASURES

SPACE

CHANCE

- find probabilities of events involving 'and', 'or' and 'at least'

ARITHMETIC

- use order of operations with integers and rational numbers
- solve ratio and rates problems

ALGEBRA

- expand and simplify expressions
- factorise linear expressions
- solve linear equations graphically and algebraically
- change the subject of an equation

MEASUREMENT

- calculate areas and perimeters of a kite, rhombus and trapezium
- calculate circumference and areas of circles
- calculate volumes and surface areas of right prisms
- apply Pythagoras' Theorem to solve right-triangle problems

SHAPE

- use angle properties of shapes

DATA

- interpret two-way tables and Venn diagrams
- recognise effect of outliers on measures of location and spread

GEOMETRY

- apply congruence conditions for triangles to solve problems
- use ratio and scale factor of similar figures
- apply angle sum of polygons to solve problems