



GRADE 8 STANDARDS OF MATHEMATICS REQUIRED

TOPIC	CONTENT
Numbers and numerals	State the place values of digits in numbers; write numbers in figures and words; find the missing number of a sequence; use the symbols $=$, $<$, $>$ to compare numbers; add, subtract, divide and multiply numbers; recognize and describe sets of numbers; find factors and multiples of numbers, prime numbers; express a number in prime factors, and find the highest common factor (H.C.F) and lowest common multiple (L.C.M) of numbers. Number patterns and sequences; recognize number pattern and generate terms.
Approximations	Round numbers and measurement to the nearest 10, 100, 1,000, 10,000, round measurement to a given decimal place and significant figures.
Fractions	Add, subtract, multiply and divide fractions; recognize equivalent fractions, mixed numbers and improper fractions; compare and order fractions. Solve word problems involving fractions.
Directed Numbers	Recognise that $-2 > -3$, $0 > -1$ and $-3 < 3$. Perform operations on directed numbers; addition subtraction, multiplication and division. Solve problems with directed numbers that involve a combination of these operations using order of operation.
Decimals and percentages	Express decimals in expanded form; perform operations on decimals; understand the relationship between decimals, fractions and percentages and be able to convert one to another; express a quantity as a percentage of another; calculate percentage increase or decrease.
Measurements	Use standard units of mass, length, area and volume, express quantities in terms of larger and smaller units; calculate the perimeter and area of triangles, quadrilaterals and the volume derived from these shapes; add and subtract metric quantities.
Ratio and proportion	Recognize the notation of ratios and express them in their simplest forms; use direct and indirect proportions.
Space and shapes	Recognize plane shapes and solid figures figures and draw nets of solids; identify solids and write the number of faces, vertices, and edges. Angle properties of parallel lines. Recognise and solve problems involving parallel lines, transversal and congruent angles; corresponding, alternate, vertically opposite and allied angles.
Money	Calculate using money; solve problems on simple interest, profit and loss, and discount.
Algebra	Expansion and simplification of algebraic expressions. Open bracket and collect like terms. Solve linear equations with variable at both sides of equation, solve equations in word problems.
Graphs	Interprete and read values from a given graph.
Statistics and Probability	Collect data and construct frequency tables; represent data on bar charts, pictograms, and pie charts; calculate the mean, median and mode for sets of data. Inertprete bar and pie charts. Understand and use probability scale from 0 to 1, calculate probability of a single event.



EXAMINATION CRITERIA-PRE-IGCSE (GRADE 8)

SECTION A

15 Multiple choice questions

Candidates should answer all questions

Weighting: 30%

SECTION B

Structured Questions (demanding elaborate solutions)

Candidates should answer all questions

Weighting: 50%

SECTION C

Aptitude Test

Candidates should answer all questions

Weighting 20%