مدرسة القديسة مريم الكاثوليكية الثانوية ـ دبي

ST. MARY'S CATHOLIC HIGH SCHOOL, DUBAI

ENTRANCE EXAMINATION 2024

MATHEMATICS PORTION – YEAR 10

(CALCULATOR)

NUMBERS:

➢ Fractions
➢ Decimals and Estimation – Estimating Calculations by rounding, Upper and lower bounds of accuracy
➢ Percentages – Increase/ Decrease , Compound interest, Original quantity
➢ Direct and Inverse proportion
➢ Using numbers in standard form.
➢ Recurring decimals
➢ Indices
➢ Surds

ALGEBRA :

➢ Sequences – To find the nth term of an arithmetic sequence.
➢ Expanding brackets and simplifying
➢ Changing subject of a formula
➢ Solving linear equations involving fractions also.
➢ Solving simultaneous equations.
➢ Solving quadratic equations by factorisation method.
➢ Graphs of a linear function
➢ Gradients of parallel / perpendicular lines.

GEOMETRY AND MEASURES:

➢ Angles and Polygons – To use angle properties of parallel lines, triangles, quadrilaterals, interior and exterior angles of polygons.
➢ Pythagoras Theorem
➢ Trigonometry in right angled triangles -To work out the missing sides and angles using trigonometry, to find the angle of elevation, depression.
➢ Congruent and Similar triangles.
➢ Area and circumference of a circle, Arc length and sector area
➢ Volume of prisms including cylinder, sphere , cone and pyramids.

STATISTICS:

- ➢ Estimating the mean from a grouped data.
- ➢ Probability – Mutually Exclusive, Independent Events, Tree diagrams
  (Conditional probability not included)
- ➢ Drawing and interpreting bar charts, pie charts and frequency polygons