

# NEFERTARI INTERNATIONAL SCHOOLS IN OCTOBER ADMISSION ASSESSMENT OUTLINE YEAR TEN

#### **MATHEMATICS**

- 9Ni.02 Use positive, negative and zero indices, and the index laws for multiplication and division.
- 9Ni.03 Understand the standard form for representing large and small numbers.
- Np.02 Understand that when a number is rounded there are upper and lower limits for the original number
- 9Nf.02 Estimate, add and subtract proper and improper fractions, and mixed numbers, using the order of operations
- 9Nf.03 Estimate, multiply and divide fractions, interpret division as a multiplicative inverse, and cancel common factors before multiplying or dividing
- 9Nf.05 Understand compound percentages
- 9Nf.08 Use knowledge of ratios and equivalence for a range of contexts
- > 9Ae.02 Understand how to manipulate algebraic expressions including:
  - expanding the product of two algebraic expressions
  - applying the laws of indices
  - simplifying algebraic fractions
- $\Rightarrow$  9As.06 Understand that straight-line graphs can be represented by equations. Find the equation in the form y = mx + c or where y is given implicitly in terms of x (fractional, positive and negative gradients)
- 9As.07 Read, draw and interpret graphs and use compound measures to compare graphs.
- 9Gp.03 Transform points and 2D shapes by combinations of reflections, translations and rotations
- > 9Gg.04 Use knowledge of area and volume to derive the formula for the volume of prisms and cylinders. Use the formula to calculate the volume of prisms and cylinders



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- 9Gg.05 Use knowledge of area, and properties of cubes, cuboids, triangular prisms, pyramids and cylinders to calculate their surface area
- > 9Gg.07 Derive and use the formula for the sum of the interior angles of any polygon
- > 9Gg.08 Know that the sum of the exterior angles of any polygon is 360°.
- > 9Gg.09 Use properties of angles, parallel and intersecting lines, triangles and quadrilaterals to calculate missing angles
- > 9Gg.10 Know and use Pythagoras' theorem
- Know and apply trigonometric ratios to calculate missing sides and angles in right angle triangles
- ➤ Use prime actors to calculate HCF and LCM
- > Rounding to a specific significant figure
- > Factorizing algebraic expressions using HCF



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### **English**





