Instructions

- Please ensure that you have read this aid before the examination.

Information

- A formula sheet will be provided for foundation tier and for higher tier students.
- The format/structure of the assessments remains unchanged.
- This exam aid provides students with additional exam formulae which they may refer to in their examinations.
- Please note, a copy of this exam aid will be made available to all students on the day of the examination as an insert in the question paper.
- There are no restrictions on who can use this aid.
- Students and teachers can discuss this exam aid.
- This document has 2 pages.
Foundation Tier Formulae Sheet

Perimeter, area and volume

Where \( a \) and \( b \) are the lengths of the parallel sides and \( h \) is their perpendicular separation:

Area of a trapezium = \( \frac{1}{2} (a + b) h \)

Volume of a prism = area of cross section \( \times \) length

Where \( r \) is the radius and \( d \) is the diameter:

Circumference of a circle = \( 2\pi r = \pi d \)

Area of a circle = \( \pi r^2 \)

Pythagoras’ Theorem and Trigonometry

In any right-angled triangle where \( a, b \) and \( c \) are the length of the sides and \( c \) is the hypotenuse:

\[ a^2 + b^2 = c^2 \]

In any right-angled triangle \( ABC \) where \( a, b \) and \( c \) are the length of the sides and \( c \) is the hypotenuse:

\[ \sin A = \frac{a}{c}, \quad \cos A = \frac{b}{c}, \quad \tan A = \frac{a}{b} \]

Compound Interest

Where \( P \) is the principal amount, \( r \) is the interest rate over a given period and \( n \) is number of times that the interest is compounded:

Total accrued = \( P \left(1 + \frac{r}{100}\right)^n\)

Probability

Where \( P(A) \) is the probability of outcome \( A \) and \( P(B) \) is the probability of outcome \( B \):

\[ P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B) \]