

Paper Reference(s) 4MA1/1HR
Pearson Edexcel International GCSE

Mathematics A
PAPER 1HR
Higher Tier
(Calculator)

Thursday 16 May 2024 – Morning

Time: 2 hours

Formulae Booklet

**DO NOT RETURN THIS BOOKLET WITH
THE QUESTION PAPER.**

Arithmetic series

Sum to n terms, $S_n = \frac{n}{2} [2a + (n - 1)d]$

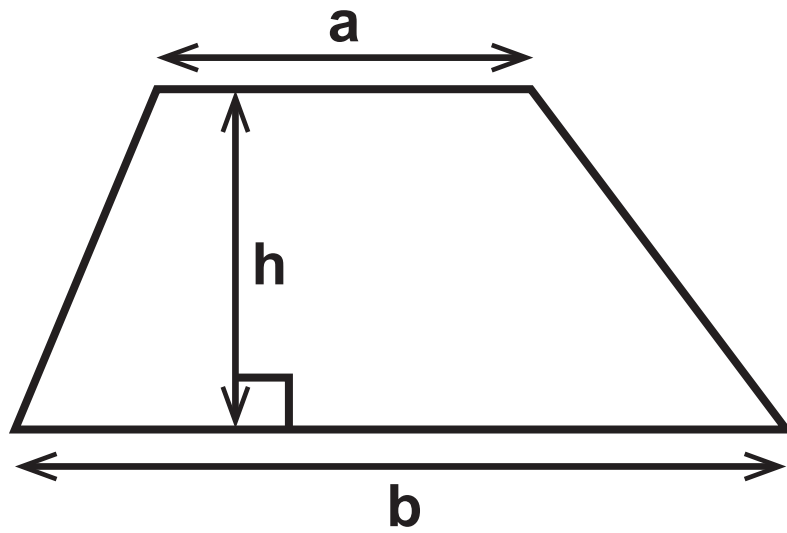
The quadratic equation

The solutions of $ax^2 + bx + c = 0$

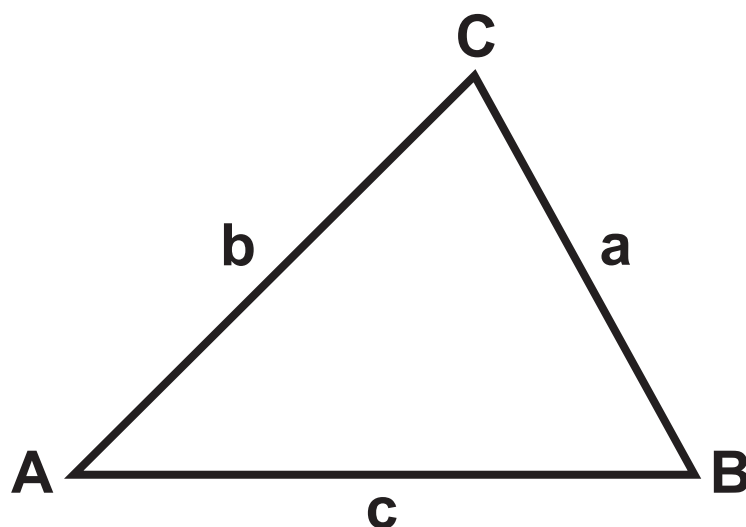
where $a \neq 0$ are given by:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

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



Trigonometry



In any triangle ABC

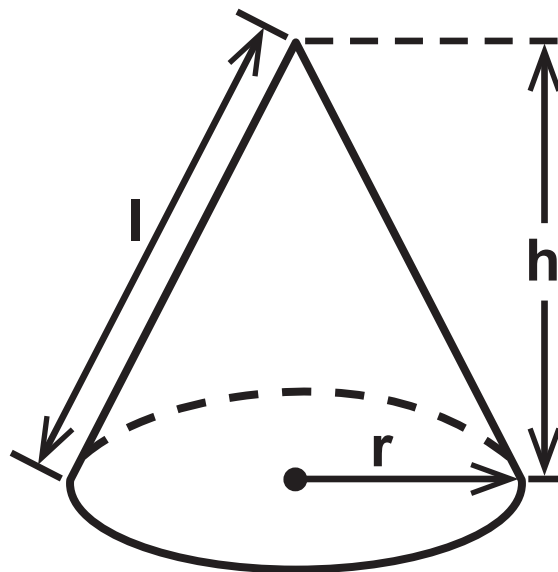
Sine Rule $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

Cosine Rule $a^2 = b^2 + c^2 - 2bc \cos A$

Area of triangle $= \frac{1}{2} ab \sin C$

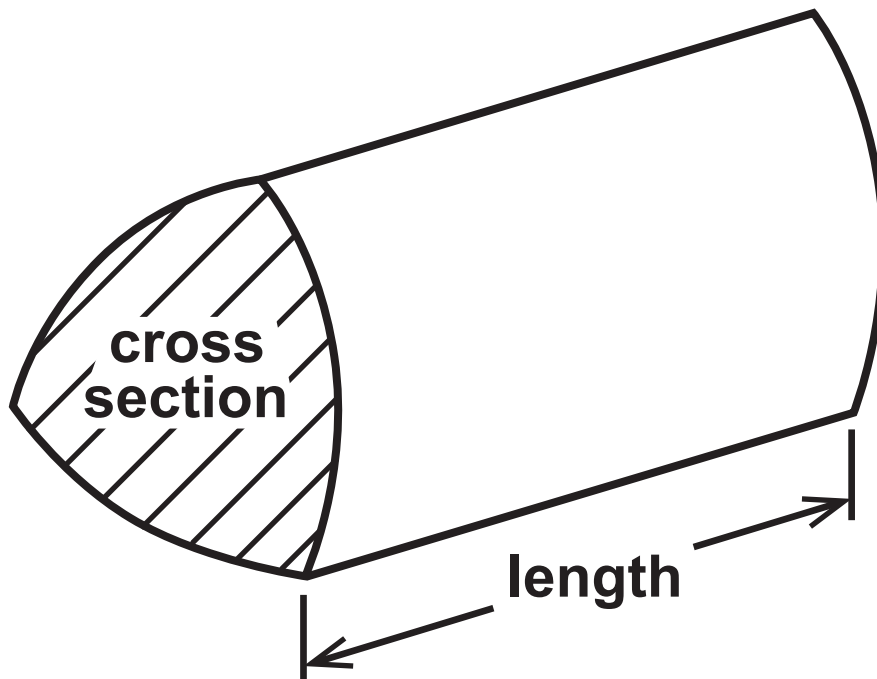
Volume of cone = $\frac{1}{3} \pi r^2 h$

Curved surface area of cone = $\pi r l$



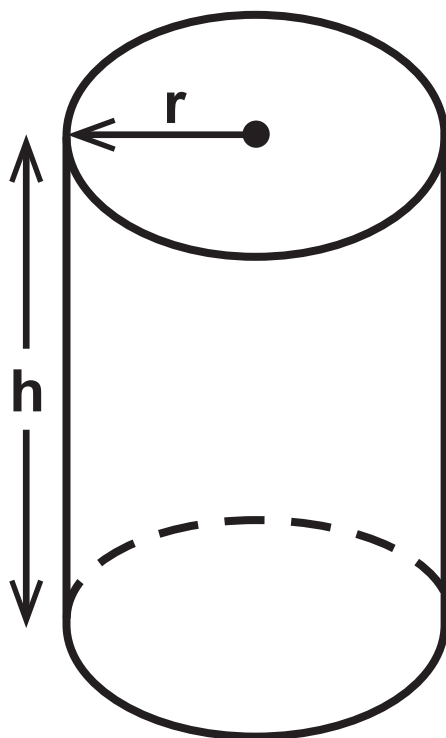
Volume of prism

= area of cross section \times length



Volume of cylinder = $\pi r^2 h$

Curved surface area of cylinder = $2\pi rh$



Volume of sphere = $\frac{4}{3} \pi r^3$

Surface area of sphere = $4\pi r^2$

