

**Paper Reference 4MA1/1H
Pearson Edexcel
International GCSE**

**Mathematics A
PAPER 1H
Higher Tier
(Calculator)**

Wednesday 8 November 2023 – Morning

Formulae Pages

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

Q73465A

Arithmetic series

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

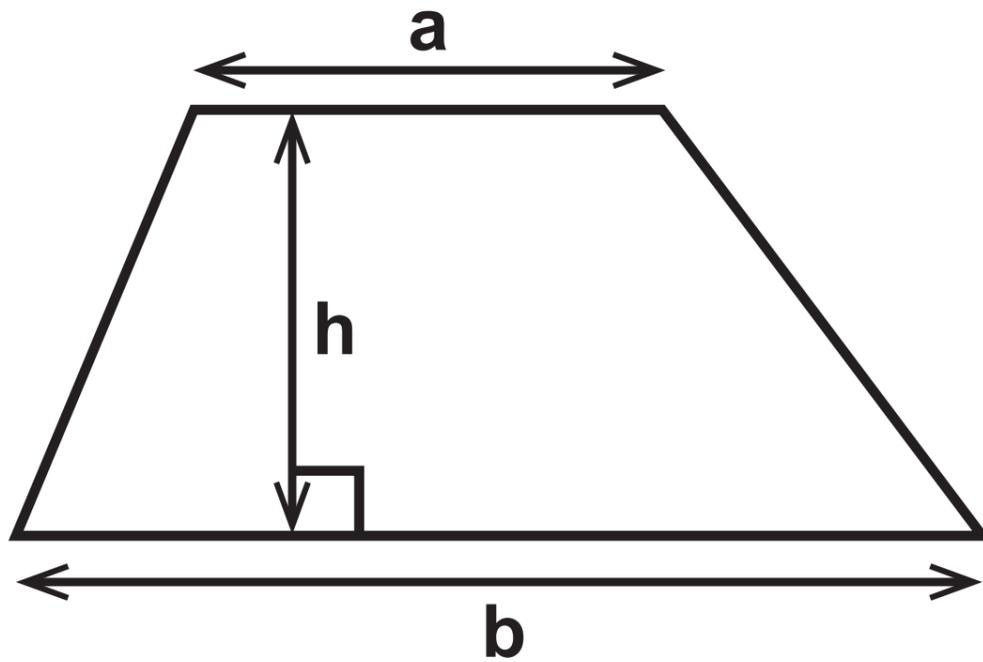
The quadratic equation

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

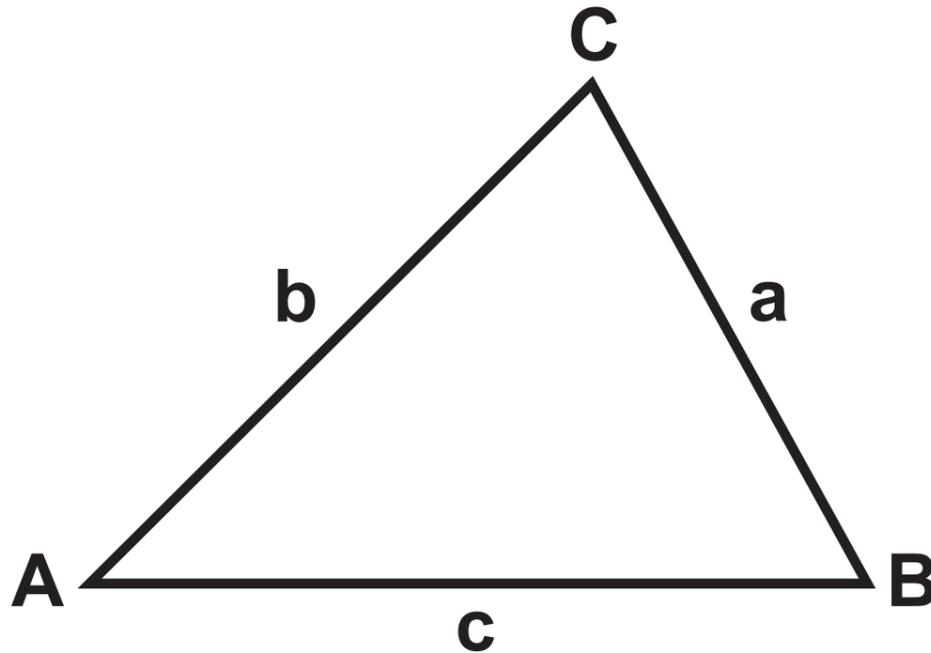
where $a \neq 0$ are given by:

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

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



Trigonometry



In any triangle ABC

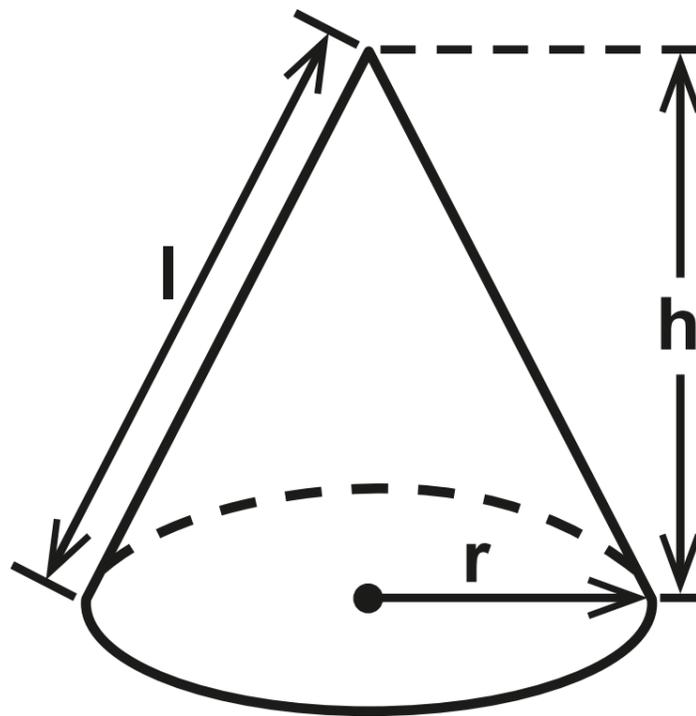
Sine Rule $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

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

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

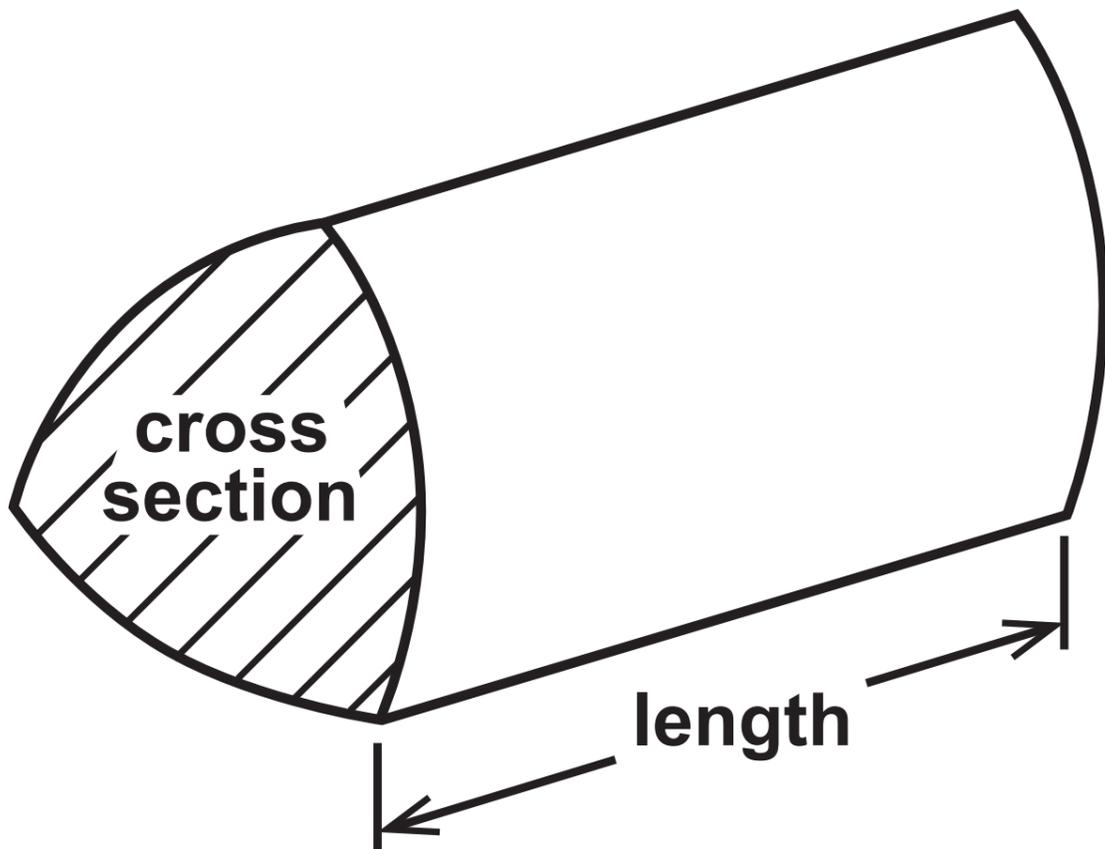
$$\text{Volume of cone} = \frac{1}{3} \pi r^2 h$$

$$\text{Curved surface area of cone} = \pi r l$$



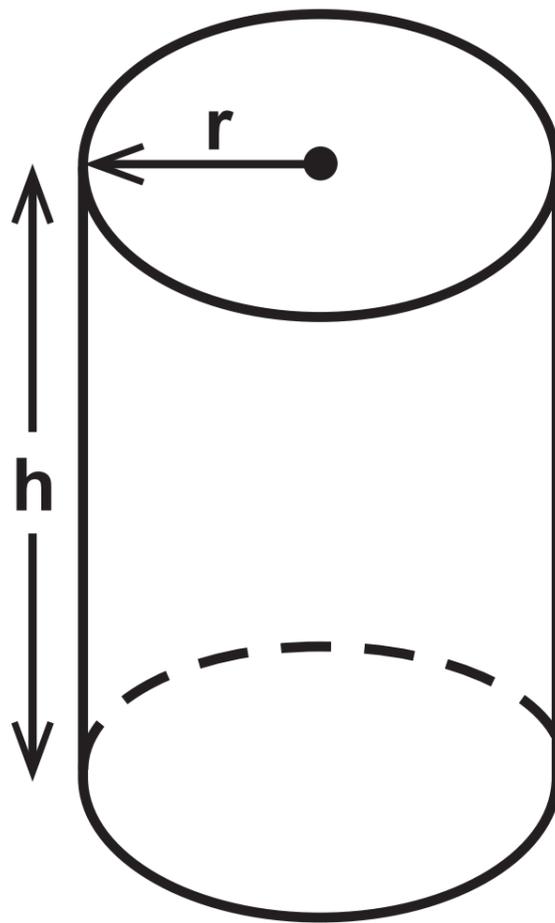
Volume of prism

= area of cross section \times length



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

Curved surface area of cylinder = $2\pi r h$



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

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

