

Paper Reference 4MA1/2HR
Pearson Edexcel
International GCSE

Mathematics A
PAPER: 2HR
Higher Tier
(Calculator)

Formulae Pages

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

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Arithmetic series

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

The quadratic equation

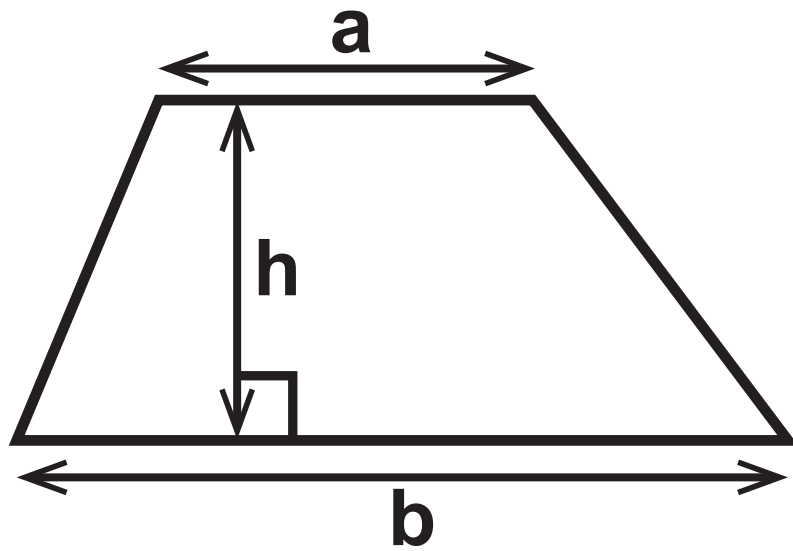
The solutions of $ax^2 + bx + c = 0$

where $a \neq 0$ are given by:

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

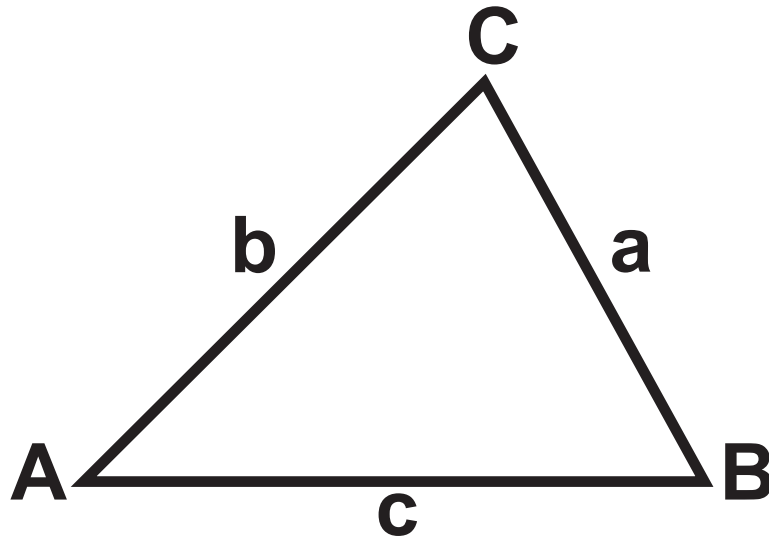
Turn over

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



Turn over

Trigonometry



In any triangle ABC

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

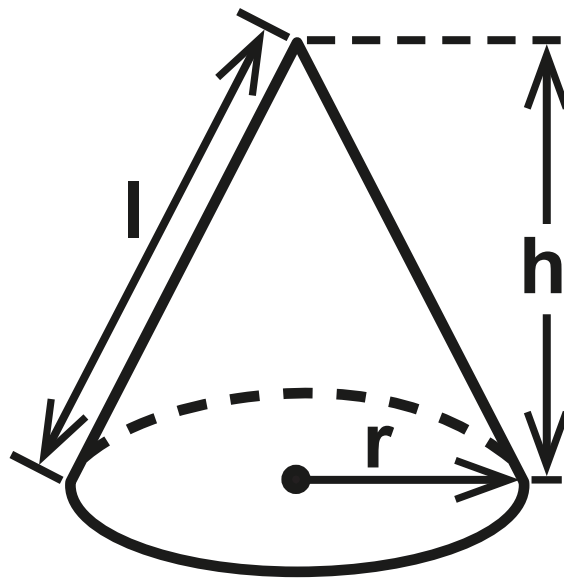
Cosine Rule $a^2 = b^2 + c^2 - 2bc \cos A$

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

Turn over

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

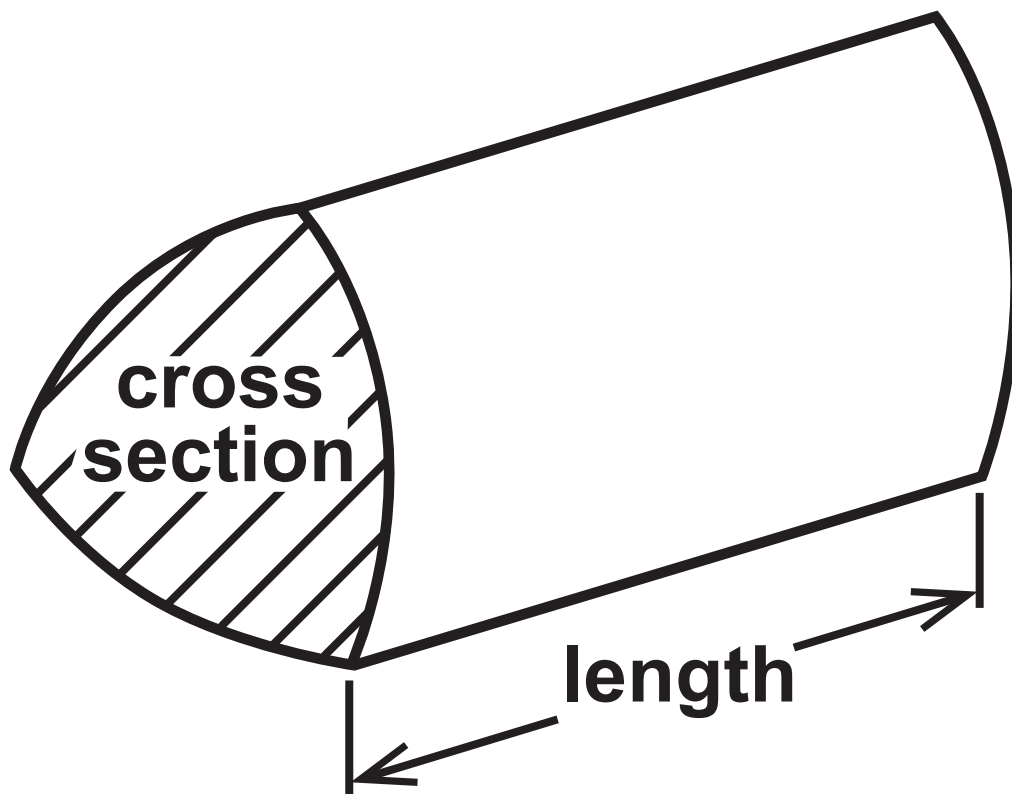
Curved surface area of cone = $\pi r l$



Turn over

Volume of prism

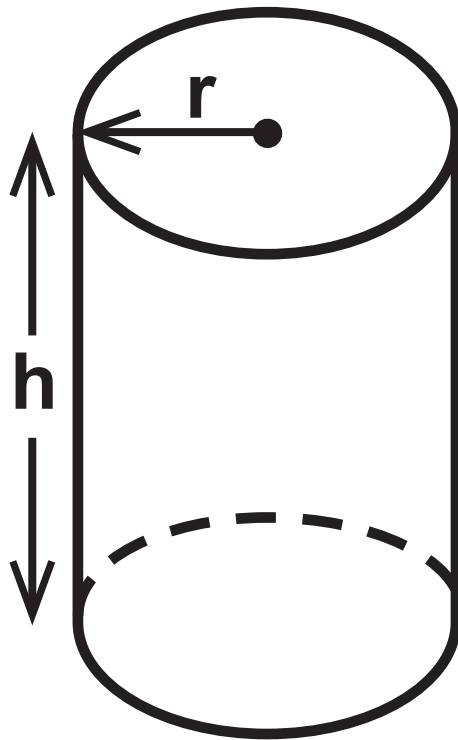
= area of cross section \times length



Turn over

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

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



Turn over

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

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

