

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

**Mathematics A
Level 1/2
Paper 1H
(Calculator)
Higher Tier**

Monday 7 January 2019 – Morning

Formulae Pages

Y59017A

Arithmetic series

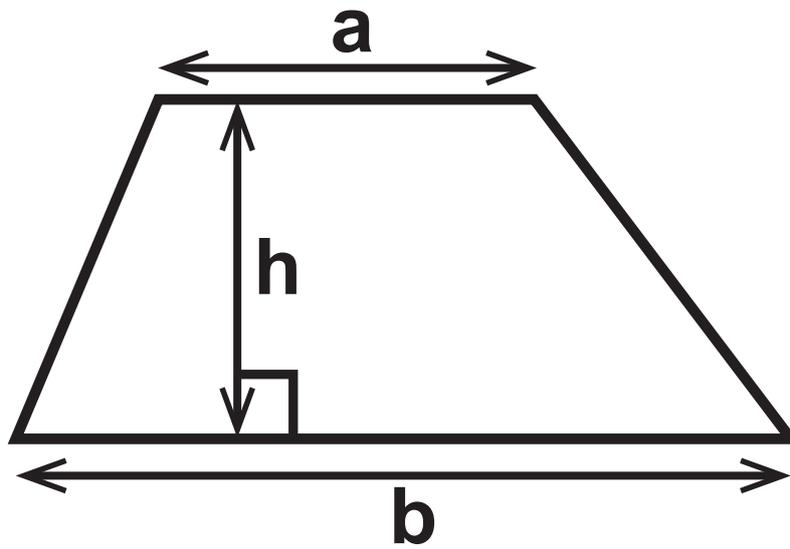
Sum to n terms, $S_n = \frac{n}{2} [2a + (n - 1)d]$

The quadratic equation

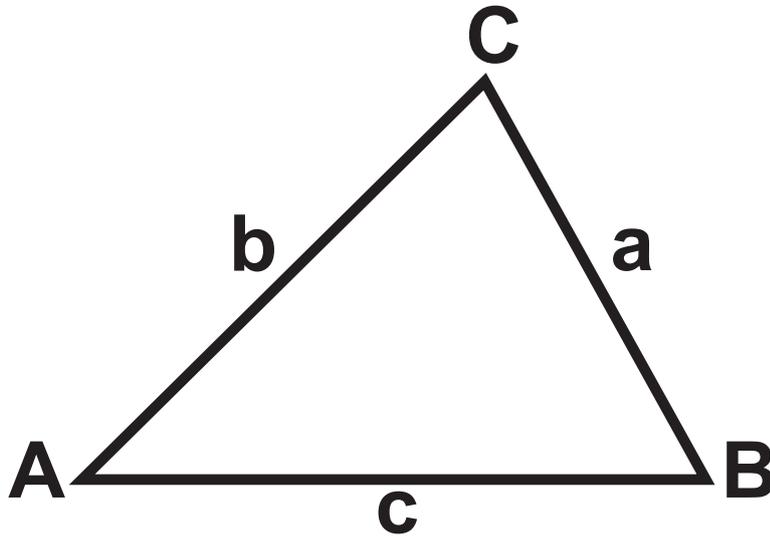
The solutions of $ax^2 + bx + c = 0$ where $a \neq 0$ are given by:

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

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



Trigonometry



In any triangle ABC

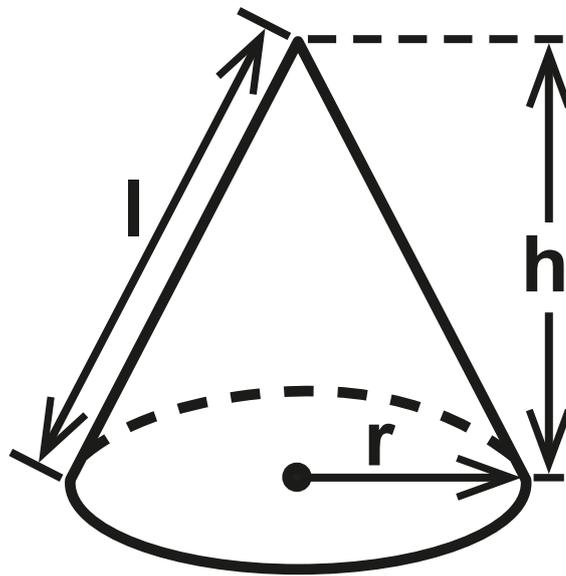
Sine Rule $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

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

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

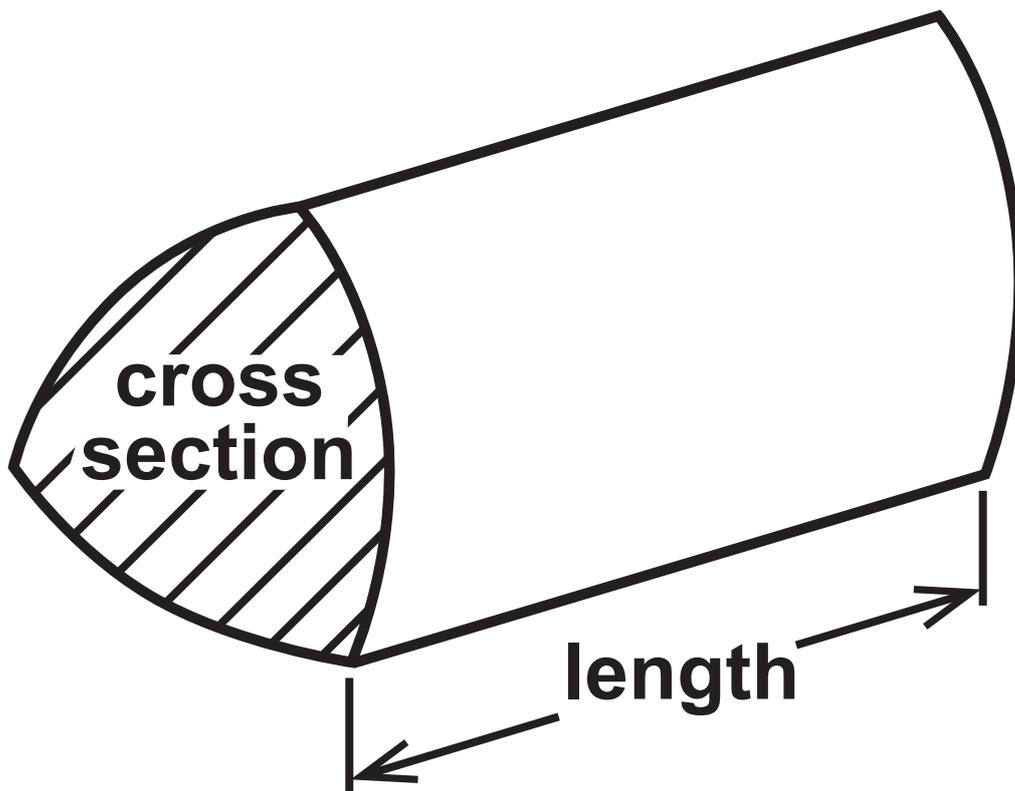
Volume of cone = $\frac{1}{3} \pi r^2 h$

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



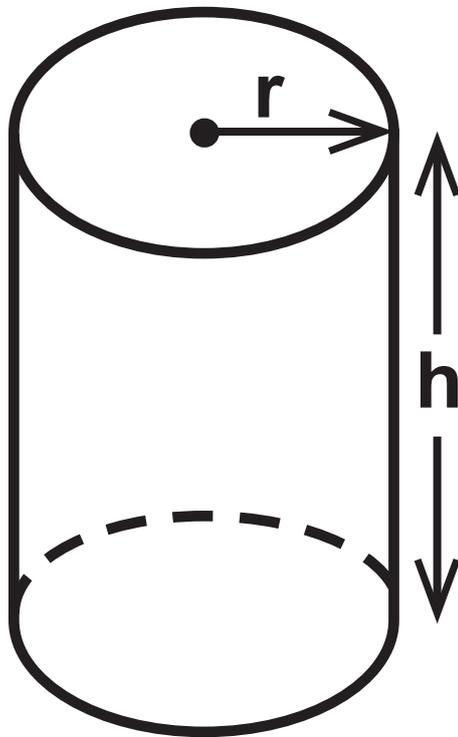
Volume of prism

= area of cross section \times length



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

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



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

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

