

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

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

Tuesday 7 January 2020 – Morning

Formulae Pages

Q59756A

Arithmetic series

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

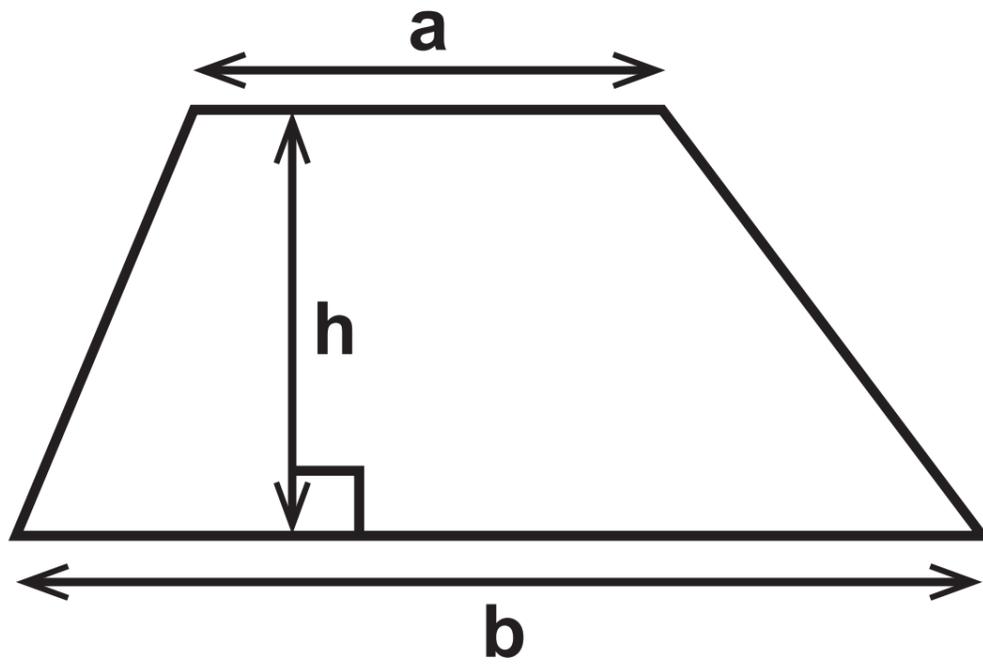
The quadratic equation

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

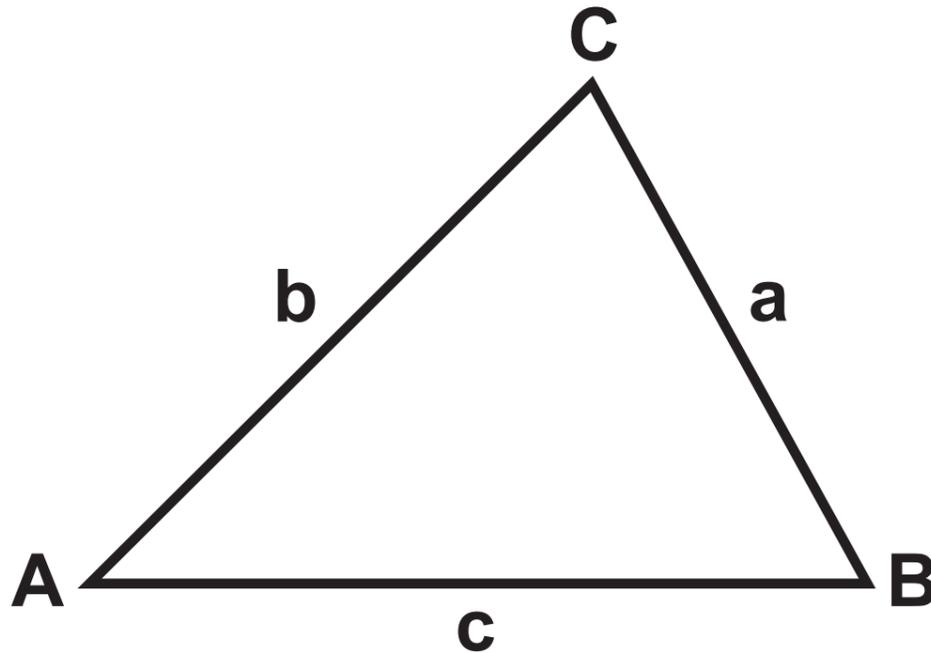
where $a \neq 0$ are given by:

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

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



Trigonometry



In any triangle ABC

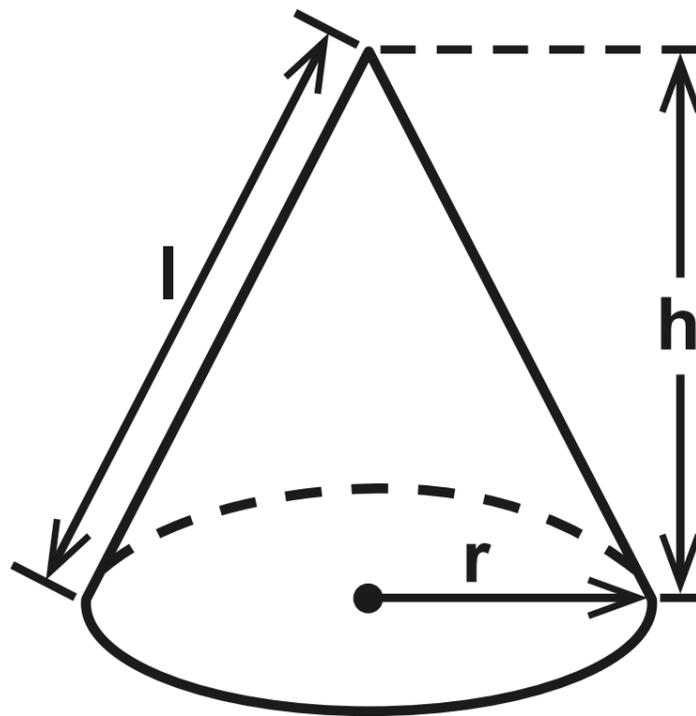
$$\text{Sine Rule } \frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

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

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

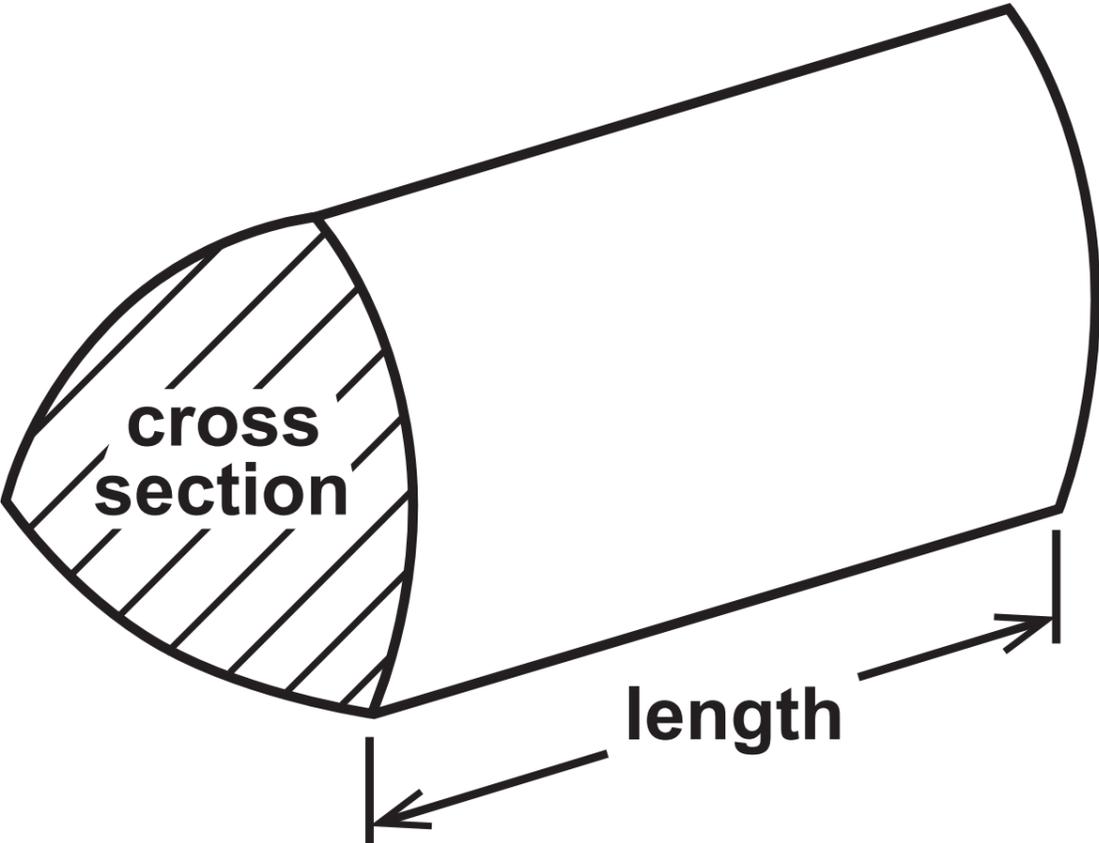
Volume of cone = $\frac{1}{3} \pi r^2 h$

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



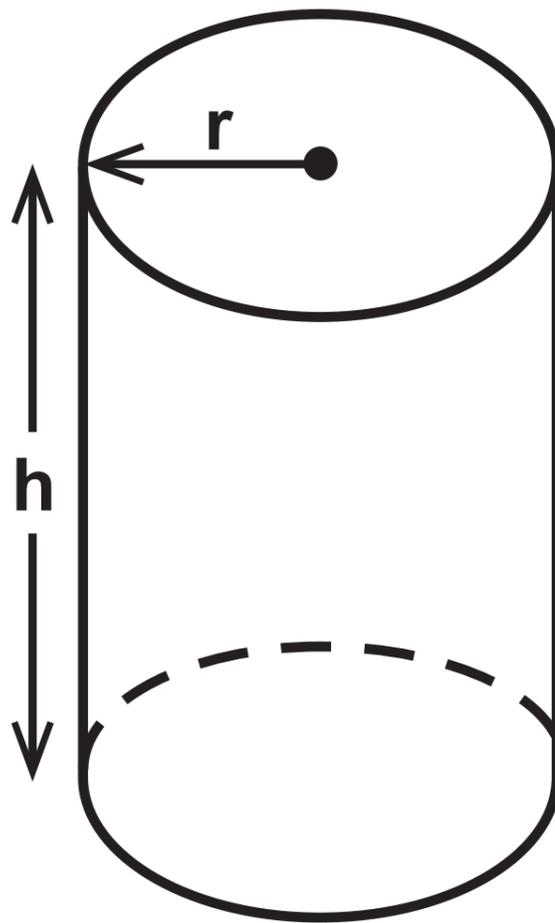
Volume of prism

= 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 = $4\pi r^2$

