

**Paper Reference 4MA1/2H  
Pearson Edexcel  
International GCSE**

**Mathematics A  
PAPER 2H  
Higher Tier  
(Calculator)**

**Friday 10 November 2023 – Morning**

**Formulae Pages**

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

**X73469A**

## Arithmetic series

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

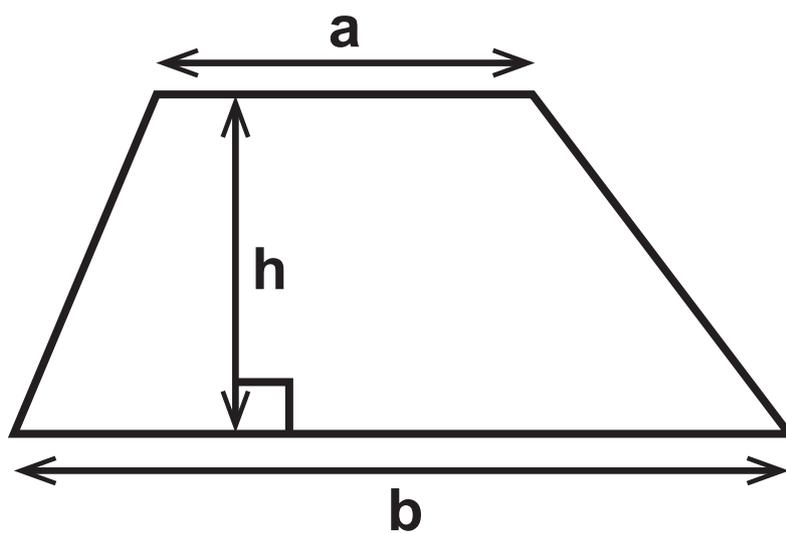
## The quadratic equation

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

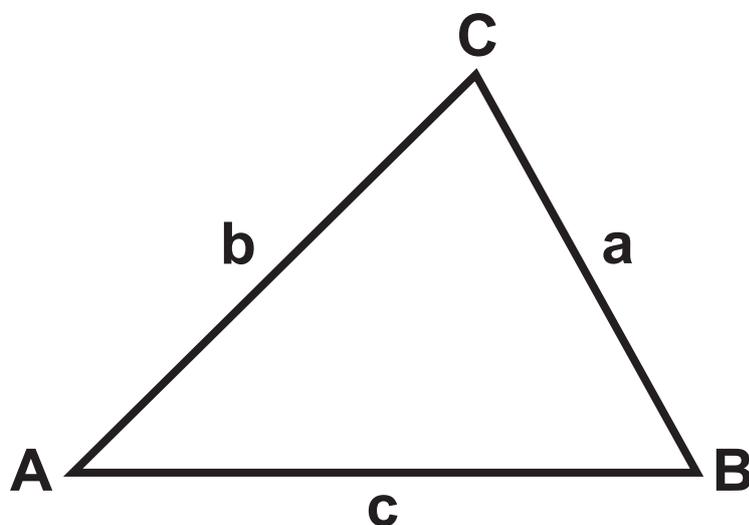
where  $a \neq 0$  are given by:

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

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



## Trigonometry



In any triangle ABC

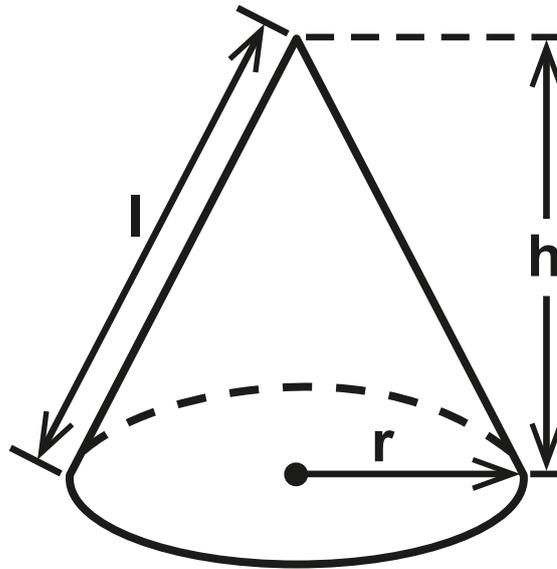
$$\text{Sine Rule } \frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

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

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

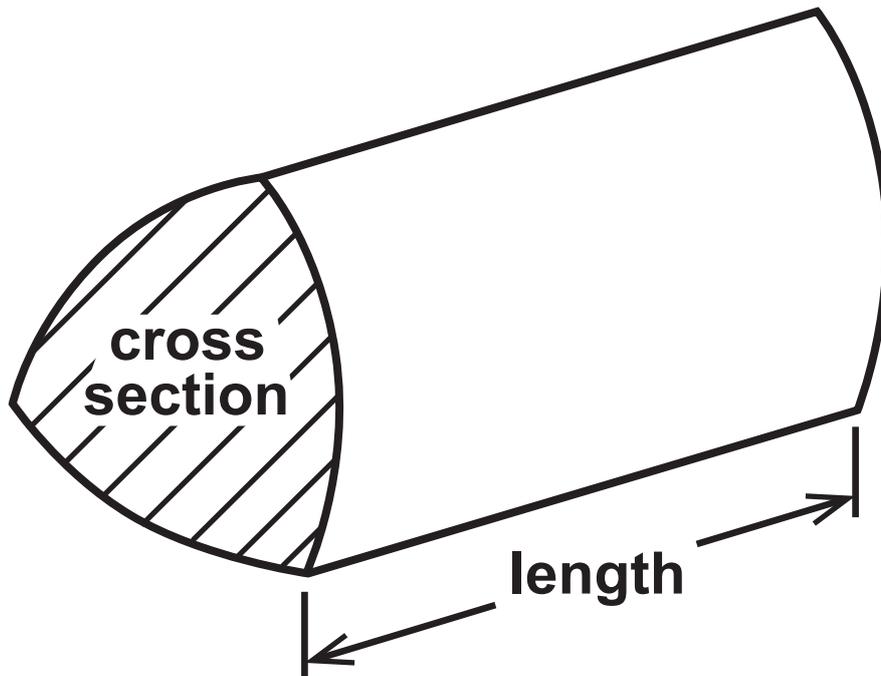
$$\text{Volume of cone} = \frac{1}{3} \pi r^2 h$$

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



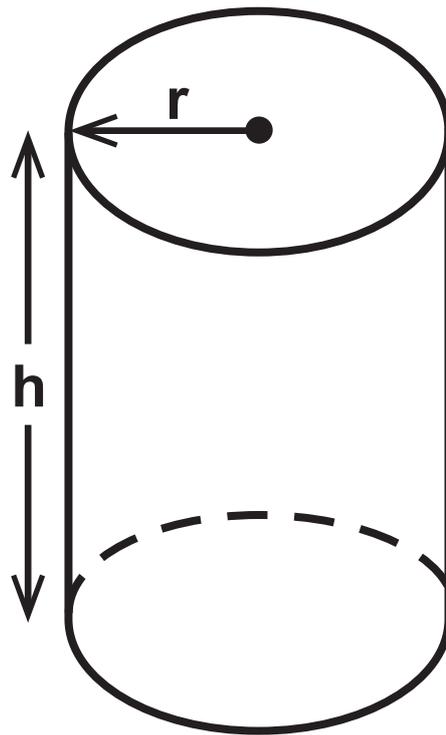
## Volume of prism

= area of cross section  $\times$  length



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

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



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

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

