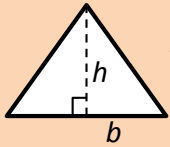
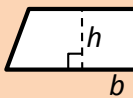


OCR GCSE (9-1) Mathematics formulae guide for all (Foundation and Higher) – print & stick in student books!
Note Higher tier students also require the 'GCSE (9-1) Mathematics Higher additional formulae' guide below.

For GCSE (9-1) Mathematics, all students should know...



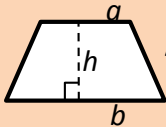
Area of triangle = $\frac{1}{2}bh$



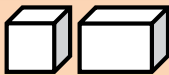
Area of parallelogram = bh



Circumference of circle = $\pi d = 2\pi r$
Area of circle = πr^2



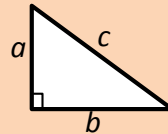
Area of trapezium = $\frac{1}{2}(a+b)h$



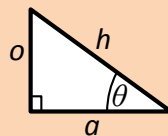
Volume of cuboids =
length \times width \times height



Volume of prisms =
length \times area of cross section



For right-angled triangles, label the hypotenuse c & the other sides a and b
Pythagoras' theorem $a^2 + b^2 = c^2$



For right-angled triangles, label the hypotenuse h , the side adjacent to the angle a & the side opposite the angle o
sin $\theta = \frac{o}{h}$ **cos** $\theta = \frac{a}{h}$ **tan** $\theta = \frac{o}{a}$

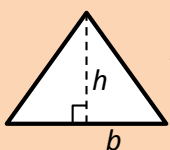
$$\text{speed} = \frac{\text{distance}}{\text{time}}$$

$$\text{density} = \frac{\text{mass}}{\text{volume}}$$

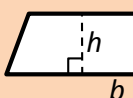
Compound interest where P is principal amount
Amount = $P \left(1 + \frac{r}{100}\right)^n$ r is interest rate
 n is times interest applied

Probability $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$
where $P(A)$ is the probability of outcome A
 $P(B)$ is the probability of outcome B

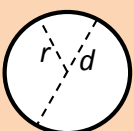
For GCSE (9-1) Mathematics, all students should know...



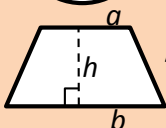
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Area of parallelogram = bh



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Area of circle = πr^2



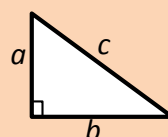
Area of trapezium = $\frac{1}{2}(a+b)h$



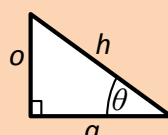
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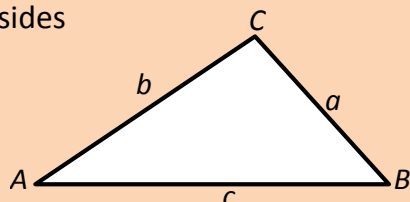
Probability $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$
where $P(A)$ is the probability of outcome A
 $P(B)$ is the probability of outcome B

OCR GCSE (9-1) Mathematics formulae guide for Higher tier students – print & stick in student books!

Note Higher tier students also require the 'GCSE (9-1) Mathematics formulae guide for all' above.

For GCSE (9-1) Mathematics, Higher tier students should also know...

In any triangle ABC where a , b and c are the lengths of the sides



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

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

Cosine rule $a^2 = b^2 + c^2 - 2bccosA$

The quadratic formula

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

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

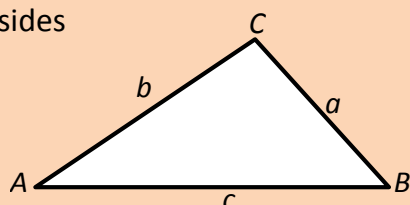
Probability

$$P(A \text{ and } B) = P(A \text{ given } B) P(B)$$

where $P(A)$ is the probability of outcome A
 $P(B)$ is the probability of outcome B

For GCSE (9-1) Mathematics, Higher tier students should also know...

In any triangle ABC where a , b and c are the lengths of the sides



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

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

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