

Syllabus reference 1MA1/2H
Pearson Edexcel GCSE (9–1)
Mathematics

Mathematics
PAPER 2 (Calculator)
Higher Tier

November 2022 Assessment Window

Higher Tier

Formulae Sheet

**DO NOT RETURN THIS
FORMULAE SHEET WITH THE
QUESTION PAPER**

Y68723A

Higher Tier Formulae Sheet

Perimeter, area and volume

Where **a** and **b** are the lengths of the parallel sides and **h** is their perpendicular separation:

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

Volume of a prism =
area of cross section \times length

(continued on the next page)

Turn over

Higher Tier Formulae Sheet

Perimeter, area and volume continued.

Where r is the radius and d is the diameter:

Circumference of a circle = $2\pi r = \pi d$

Area of a circle = πr^2

Turn over

Higher Tier Formulae Sheet

Quadratic formula

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

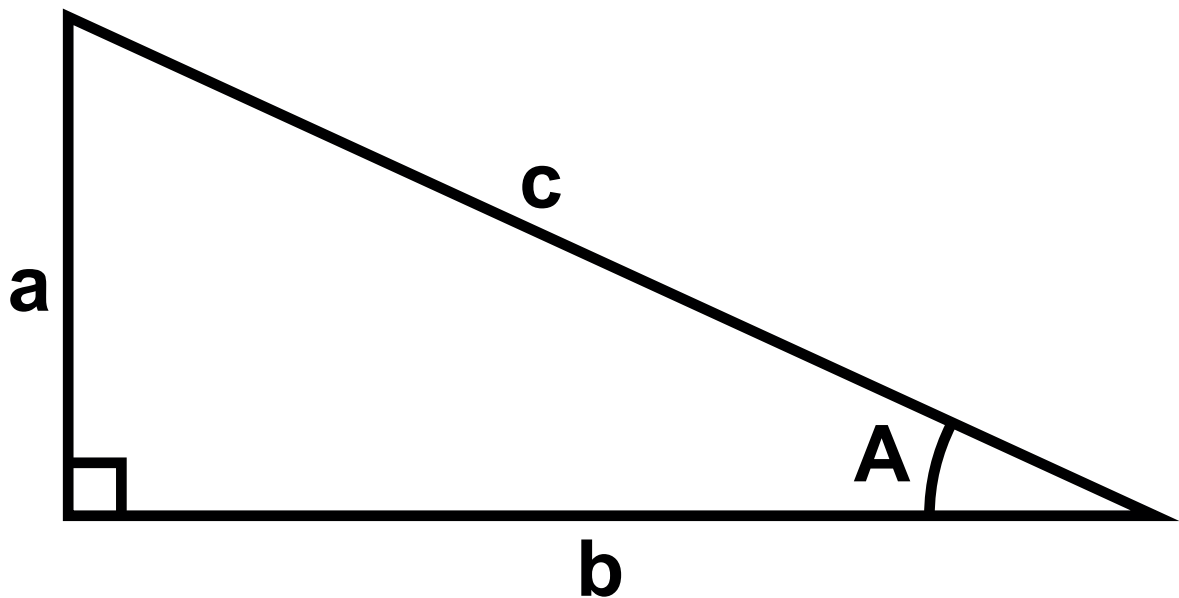
where $a \neq 0$

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

Turn over

Higher Tier Formulae Sheet

Pythagoras' Theorem and Trigonometry



(continued on the next page)

Turn over

Higher Tier Formulae Sheet

Pythagoras' Theorem and Trigonometry continued.

In any right-angled triangle where a , b and c are the length of the sides and c is the hypotenuse:

$$a^2 + b^2 = c^2$$

In any right-angled triangle ABC where a , b and c are the length of the sides and c is the hypotenuse:

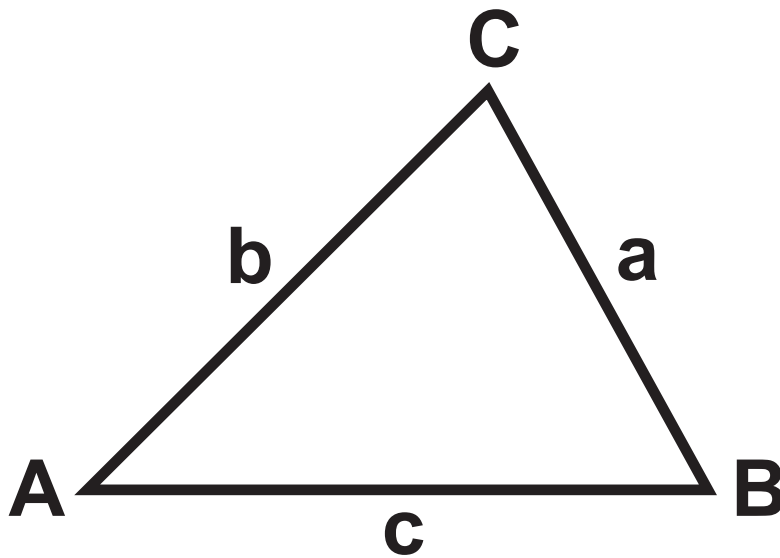
$$\sin A = \frac{a}{c} \quad \cos A = \frac{b}{c} \quad \tan A = \frac{a}{b}$$

(continued on the next page)

Turn over

Higher Tier Formulae Sheet

Pythagoras' Theorem and Trigonometry continued.



(continued on the next page)

Turn over

Higher Tier Formulae Sheet

Pythagoras' Theorem and Trigonometry continued.

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

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 = $\frac{1}{2} a b \sin C$

Turn over

Higher Tier Formulae Sheet

Compound Interest

Where **P** is the principal amount, **r** is the interest rate over a given period and **n** is number of times that the interest is compounded:

$$\text{Total accrued} = P \left(1 + \frac{r}{100} \right)^n$$

Turn over

Higher Tier Formulae Sheet

Probability

Where $P(A)$ is the probability of outcome **A** and $P(B)$ is the probability of outcome **B**:

$$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$$

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

END OF EXAM AID
