STUDY FORMULA BOOKLET

OxfordAQA International GCSE Maths 9260 Core formulae sheet

The Core sheet prints trapezium, prism and circle formulae, Pythagoras, sine, cosine and tangent ratios and one probability rule. Everything else must be learned.

IN THE BOOKLET printed in the official booklet LEARN IT not printed: students must recall it

Based on the official **International GCSE Mathematics Core (9260) Formulae Sheet, OxfordAQA insert IB/M/Insert to GCSE Mathematics Core/E3, for exams in November 2021 and May/June 2022 only**, with what to learn and exam tips added by CuratedPrep.

Perimeter, area and volume

Printed on the sheet for the Core papers.

Area of a trapezium a and b are the lengths of the parallel sides; h is their perpendicular separation.	$A = \frac{1}{2}(a+b)h$	IN THE BOOKLET
Volume of a prism Works for cuboids and cylinders: a cylinder is V = πr²h.	$V = \text{area of cross section} \times \text{length}$	IN THE BOOKLET
Circumference of a circle r is the radius and d is the diameter.	$C = 2\pi r = \pi d$	IN THE BOOKLET
Area of a circle r is the radius. Leave answers in terms of π when asked.	$A = \pi r^2$	IN THE BOOKLET

Pythagoras' theorem and trigonometry

Pythagoras' theorem Right-angled triangle; c is the hypotenuse, the longest side.	$a^2 + b^2 = c^2$	IN THE BOOKLET
Sine ratio Opposite over hypotenuse (a is opposite x). In the sheet's right-angled triangle the angle is x and c is the hypotenuse.	$\sin x = \frac{a}{c}$	IN THE BOOKLET
Cosine ratio Adjacent over hypotenuse (b is next to x).	$\cos x = \frac{b}{c}$	IN THE BOOKLET
Tangent ratio Opposite over adjacent.	$\tan x = \frac{a}{b}$	IN THE BOOKLET

Probability

Mutually exclusive events For mutually exclusive events A and B, which cannot happen together. The symbol ∪ means 'or'.	$P(A \cup B) = P(A) + P(B)$	IN THE BOOKLET

Learn these: not in the booklet

Area of a triangle

$A = \frac{1}{2}bh$

Area of a parallelogram

$A = bh$

Volume of a cuboid

$V = lwh$; cylinder: $V = \pi r^2 h$

SOH CAH TOA

$\sin\theta = \dfrac{O}{H}$, $\cos\theta = \dfrac{A}{H}$, $\tan\theta = \dfrac{O}{A}$; angle $= \sin^{-1}\left(\dfrac{O}{H}\right)$

Speed, density, pressure

$\text{speed} = \dfrac{\text{distance}}{\text{time}}$, $\text{density} = \dfrac{\text{mass}}{\text{volume}}$, $\text{pressure} = \dfrac{\text{force}}{\text{area}}$

Metric conversions

$1\text{ m} = 100\text{ cm}$, $1\text{ cm}^2 = 100\text{ mm}^2$, $1\text{ m}^2 = 10\,000\text{ cm}^2$, $1\text{ m}^3 = 1\,000\,000\text{ cm}^3$, $1\text{ litre} = 1000\text{ cm}^3$

Simple interest

$I = \dfrac{Prt}{100}$

Percentage change

$\dfrac{\text{new} - \text{old}}{\text{old}} \times 100$

Percentage multipliers

increase by $r\%$: $\times \left(1 + \dfrac{r}{100}\right)$; decrease by $r\%$: $\times \left(1 - \dfrac{r}{100}\right)$

Sharing in a ratio

$\text{one part} = \dfrac{\text{total}}{\text{total number of parts}}$

Mean from a frequency table

$\bar{x} = \dfrac{\sum fx}{\sum f}$, range $=$ largest $-$ smallest

Probability basics

$P(\text{not } A) = 1 - P(A)$, all outcomes sum to 1, expected number $= P \times n$

Relative frequency

$\dfrac{\text{number of times the outcome happens}}{\text{total number of trials}}$

Angle sums

triangle 180°, quadrilateral 360°, straight line 180°, point 360°

Polygons

interior angle sum $= (n-2) \times 180^\circ$, exterior angle of a regular polygon $= \dfrac{360^\circ}{n}$, interior $= 180^\circ -$ exterior

Straight line

$y = mx + c$, $m = \dfrac{\text{change in } y}{\text{change in } x}$, parallel lines have equal m

nth term of a linear sequence

$an + b$, where a is the common difference

Direct and inverse proportion

$y = kx$, $y = \dfrac{k}{x}$

Index laws

$a^m \times a^n = a^{m+n}$, $a^m \div a^n = a^{m-n}$, $(a^m)^n = a^{mn}$, $a^0 = 1$, $a^{-n} = \dfrac{1}{a^n}$

Difference of two squares

$a^2 - b^2 = (a-b)(a+b)$

Expanding two brackets

$(x+p)(x+q) = x^2 + (p+q)x + pq$

Similar shapes

scale factor $k = \dfrac{\text{new length}}{\text{original length}}$

Bearings

measured clockwise from north in three figures; back bearing $=$ bearing $\pm 180^\circ$

Standard form

$A \times 10^n$, $1 \le A < 10$, n an integer

Sets

$n(A)$ counts elements, A' is the complement, $A \cup B$ union, $A \cap B$ intersection

Error interval after rounding

lower bound $\le x <$ upper bound, half the rounding unit either side

Using the booklet in the exam

- Check the sheet first. Core does not print the sine or cosine rules, so do not try to use them.
- Label the triangle with opposite, adjacent and hypotenuse before using the sheet's a, b and c ratios.
- The sheet calls the angle x. Mark it on your diagram and check which side is opposite it.
- Compound interest is not printed on the Core sheet, so use a multiplier for each year and repeat it, for example 1.05 three times.
- For mutually exclusive events add the probabilities. Check the events cannot happen together before you use the printed rule.

Based on: OxfordAQA International GCSE Mathematics 9260 (Core tier), Formulae Sheet insert, exams in November 2021 and May/June 2022; OxfordAQA International GCSE Mathematics 9260 specification, Appendix 6.1: formulae which need to be known. Statistical tables are calculated by CuratedPrep to the same layout. Updated 31 October 2026. Always practise with the version of the official booklet your exam uses. More free sheets and topic worksheets at curatedprep.com.