

IGCSE Math Formula Sheet

Key formulas for Cambridge IGCSE Mathematics (0580). Organized by topic for quick revision.

Percentages & Interest

% of amount: $(\text{Percentage} / 100) \times \text{Amount}$

% change: $(\text{Change} / \text{Original}) \times 100$

Simple interest: $I = PRT / 100$

Compound: $A = P(1 + r/100)^n$

Equations & Sequences

Quadratic: $x = (-b \pm (b^2 - 4ac)) / 2a$

Simultaneous: Elimination or substitution

nth term: $a + (n - 1)d$

Finding rule: $d = \text{common diff, write as } dn + (a - d)$

Area Formulas

Triangle: $A = (1/2) \times \text{base} \times \text{height}$

Parallelogram: $A = \text{base} \times \text{height}$

Trapezium: $A = (1/2)(a + b) \times h$

Circle: $A = \pi r^2, C = 2\pi r$

Trigonometry

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

sin(A): Opposite / Hypotenuse

cos(A): Adjacent / Hypotenuse

tan(A): Opposite / Adjacent

Sine rule: $a/\sin(A) = b/\sin(B) = c/\sin(C)$

Cosine rule: $a^2 = b^2 + c^2 - 2bc \cdot \cos(A)$

Volume Formulas

Prism: $V = \text{cross-section} \times \text{length}$

Cylinder: $V = \pi r^2 \times h$

Sphere: $V = (4/3)\pi r^3$

Cone: $V = (1/3)\pi r^2 \times h$

Statistics & Probability

Mean (freq): Sum of $(f \times x) / \text{Sum of } f$

Probability: $P = \text{Favourable} / \text{Total outcomes}$

Practice applying each formula to real exam questions - understanding when to use it matters more than memorizing it.