

Geometry Formulas Cheat Sheet

Every formula you need for 2D and 3D shapes

2D Shapes

Rectangle: $A = lw$, $P = 2l + 2w$

Triangle: $A = (1/2)bh$

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

Trapezoid: $A = (1/2)(a + b)h$

Parallelogram: $A = bh$

Key Theorems

Pythagorean: $a^2 + b^2 = c^2$ (right triangles)

30-60-90: Sides 1, $\sqrt{3}$, 2

45-45-90: Sides 1, 1, $\sqrt{2}$

Triangle angles: Sum = 180

Polygon angles: $(n - 2) \times 180$

3D Shapes

Prism: $V = lwh$, $SA = 2(lw + lh + wh)$

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

Sphere: $V = (4/3) \cdot \pi r^3$, $SA = 4 \cdot \pi r^2$

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

Draw the shape every time. Label what you know. The formula will become obvious.