

Volume and Surface Area of Solids

10th Grade

The formulas a geometry paper assumes you have.

Every one of these uses the base and the height, or the radius.

Solid	Volume	Surface area
Prism	$B \times h$	$2B + \text{perimeter} \times h$
Cylinder	$\pi r^2 h$	$2\pi r^2 + 2\pi r h$
Pyramid	$\frac{1}{3}Bh$	$B + \frac{1}{2} \times \text{perimeter} \times \text{slant}$
Cone	$\frac{1}{3}\pi r^2 h$	$\pi r^2 + \pi r l$
Sphere	$\frac{4}{3}\pi r^3$	$4\pi r^2$

Cones and pyramids use the SLANT height for surface area and the perpendicular height for volume.