Geometry Formulas

Area Formulas

Lateral Area of cylinder $= 2\pi rh$

Lateral Area of prism $= p \cdot h$

Lateral Area of cone $= \pi r \ell$

Lateral Area of pyramid $= \frac{1}{2} \cdot p \cdot \ell$

Surface Area of prisms and cylinders $= LA + 2B$

Surface Area of pyramids and cones $= LA + B$

Surface Area of sphere $= 4\pi r^2$

$$A_{(\text{Circle})} = \pi r^2 \qquad A_{\Delta} = \frac{1}{2}bh \qquad A_{(\text{Parallelogram})} = bh \qquad A_{(\text{Regular Polygon})} = \frac{1}{2}ap$$

$$A_{(\text{Trapezoid})} = \frac{1}{2}(b_1 + b_2)h \qquad A_{(\text{Kite \& Rhombus})} = \frac{1}{2} \cdot d_1 \cdot d_2$$

Volume Formulas

Volume of prisms $= B \cdot h$

Volume of cylinders $= \pi r^2 h$

Volume pyramids $= \frac{1}{3}Bh$

Volume of cones $= \frac{1}{3}\pi r^2 h$

Volume of sphere $= \frac{4}{3}\pi r^3$

Other Formulas

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \qquad \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right) \qquad a^2 + b^2 = c^2$$

$$m = \frac{y_2 - y_1}{x_2 - x_1} \qquad y = mx + b \qquad y - y_1 = m(x - x_1)$$

$$C = \pi d = 2\pi r \qquad (x - h)^2 + (y - k)^2 = r^2$$

Special Right Triangles