MIDDLE SCHOOL EDUCATION: MATHEMATICS FORMULAS

Formula	Description
$V = \frac{1}{3}Bh$	Volume of a right cone and a pyramid
$V = \frac{4}{3}\pi r^3$	Volume of a sphere
$A = 4\pi r^2$	Surface area of a sphere
$A = \pi r\sqrt{r^2 + h^2}$	Lateral surface area of a right circular cone
$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$	Distance formula
$\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$	Midpoint formula
$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$	Quadratic formula
$\sum_{n=0}^{\infty} ar^n = \frac{a}{1-r}\ ,\ \lvert r\rvert < 1$	Sum of an infinite geometric series
${}_nP_r = P\ (n,r) = \frac{n!}{(n-r)!}$	Permutations
${}_nC_r = C\ (n,r) = \frac{n!}{(n-r)!r!}$	Combinations