

## GMAT FORMULAS

Summation Formula =  $\frac{\text{Number of numbers} * (f + 1)}{2}$ , where number of numbers =  $f - 1 + 1$

Percent Change =  $\text{Difference} / \text{Original}$

Rectangular Solid Volume =  $L * W * H$

Cube Volume =  $S * S * S$

Cylinder Volume =  $\text{Pie} R^2 \text{H}$

Surface Area (Combined area of all the surfaces, or faces, of a solid)

Surface Area of Rectangular Solid =  $2lw + 2lh + 2wh$

Surface Area of a Cube =  $6s^2$

Principal + Interest =  $\text{principal} * (1+r)^t$ , where

Total =  $\text{Group 1} + \text{Group 2} - \text{Both} + \text{Neither}$

Quadratics

- $(x + y)^2 = x^2 + 2xy + y^2$
- $(x - y)^2 = x^2 - 2xy + y^2$
- $(x + y)(x - y) = x^2 - y^2$

Number of permutations (different arrangements when order matters) =  $\frac{n!}{(n-r)!}$

Number of combinations (arrangements when order doesn't matter) =  $\frac{n!}{r!(n-r)!}$

where  $n$  = number of objects in the source group

where  $r$  = number of objects selected

The length of a given side must be greater than the difference of the other two sides and less than the sum of the other two sides.