

The *Ultimate* Formula Sheet for SAT Math

These formulas are provided in the reference information at the beginning of each SAT math section:

Area of a Circle: $A = \pi r^2$

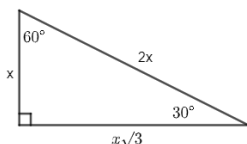
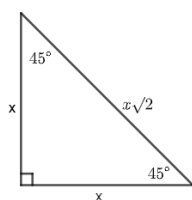
Circumference of a Circle: $C = 2\pi r$

Area of a Rectangle: $A = lw$

Area of a Triangle: $A = \frac{1}{2}bh$

Pythagorean Theorem: $a^2 + b^2 = c^2$

Special Right Triangles:



Volume of a Rectangular Prism (Box): $V = lwh$

Volume of a Cylinder: $V = \pi r^2 h$

Volume of a Sphere: $V = \frac{4}{3}\pi r^3$

Volume of a Cone: $V = \frac{1}{3}\pi r^2 h$

Volume of a Pyramid: $V = \frac{1}{3}lwh$

Fractions, Decimals, and Percentages: (for this section, r is the percent in decimal form)

Fraction = $\frac{\text{part}}{\text{whole}}$

percent = $\frac{\text{part}}{100}$

Percent Increase or Decrease:

$\frac{|\text{old} - \text{new}|}{\text{old}} \times 100\%$

Increase by a percent: multiply by $(1 + r)$

Decrease by a percent: multiply by $(1 - r)$

Simple Interest: $A = P(1 + rt)$

Interest Compounded Annually: $A = P(1 + r)^t$

Interest Compounded n times per year:

$A = P\left(1 + \frac{r}{n}\right)^{nt}$

Rates, Ratios, and Proportions:

General form of a conversion factor:

$\left(\frac{\text{ending_units}}{\text{starting_units}}\right)$

Example: $10\text{feet} \left(\frac{12\text{inches}}{1\text{foot}}\right) = 120\text{inches}$

Concentration of A x Volume of A
+ Concentration of B x Volume of B
= Final concentration (Vol. of A + Vol. of B)

Distance = Rate x Time