

The official student reference guide by **CalcSolver** (also known as **SolveCalc**). Designed for Middle School, High School, and AP/College STEM courses with high-contrast, printable study sheets and instant interactive tools on Chromebooks, tablets, and mobile.


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Calculate volume, surface area, arc length, and triangle properties in seconds.

Kinematics, forces, energy, and electrical circuits solved step-by-step.

Standard deviation, combinations, permutations, and GPA grade calculator.

2D Area, Perimeter & 3D Solid Volume Sheet

Essential formulas for middle and high school geometry. Verify solutions instantly on [CalcSolver](#).

2D Shapes: Area & Perimeter

Circle (Area & Circumference)

Circles

$A = \pi r^2$

|

 $C = 2\pi r$

Triangle (Base & Height)

Triangles

$A = \frac{1}{2} \cdot b \cdot h$

Trapezoid Area

Quadrilaterals

$A = \frac{1}{2} (a + b) \cdot h$

Parallelogram Area

Quadrilaterals

$A = b \cdot h$

Arc Length of Sector

Circles

$s = r \cdot \theta$

(θ in rad)

Sector Area

Circles

$A = \frac{1}{2} r^2 \cdot \theta$

(θ in rad)

3D Solids: Volume & Total Surface Area

3D Solid Name	Volume Formula (V)	Surface Area Formula (SA)
Sphere	$V = \frac{4}{3} \pi r^3$	$SA = 4 \pi r^2$
Cylinder	$V = \pi r^2 h$	$SA = 2\pi rh + 2\pi r^2$
Cone	$V = \frac{1}{3} \pi r^2 h$	$SA = \pi r(r + \sqrt{h^2 + r^2})$
Rectangular Prism	$V = l \cdot w \cdot h$	$SA = 2(lw + lh + wh)$
Pyramid (Square Base)	$V = \frac{1}{3} s^2 h$	$SA = s^2 + 2s \cdot l$

Coordinate Geometry & Lines

Distance Formula

$d = \sqrt{[(x_2 - x_1)^2 + (y_2 - y_1)^2]}$

Midpoint Formula

$M = ((x_1+x_2)/2 , (y_1+y_2)/2)$

Slope of a Line

$m = (y_2 - y_1) / (x_2 - x_1)$

Point-Slope Form

$y - y_1 = m(x - x_1)$



Need to find volume, angles, or surface area? Calculate instantly on [CalcSolver](#)

[Open Geometry Solver →](#)

⚡ Physics, Kinematics & Chemistry Formula Sheet

High school & AP Physics core formulas. Solve physics problems step-by-step on [CalcSolver](#).

🚗 Kinematics: 1D Constant Acceleration

Velocity-Time Equation

$$v = v_0 + a \cdot t$$

Position-Time Equation

$$\Delta x = v_0 \cdot t + \frac{1}{2} a \cdot t^2$$

Timeless Equation

$$v^2 = v_0^2 + 2a \cdot \Delta x$$

Average Velocity

$$v_{avg} = (v_0 + v) / 2$$

🤖 Dynamics, Forces & Gravitation

Newton's Second Law

$$F_{net} = m \cdot a$$

Weight & Gravity

$$F_g = m \cdot g \quad (g \approx 9.8 \text{ m/s}^2)$$

Friction Force

$$F_f = \mu \cdot F_N$$

Universal Gravitation

$$F = G \cdot (m_1 \cdot m_2) / r^2$$

🌱 Energy, Electricity & Gas Laws

Concept / Law	Formula	Standard Units
Kinetic Energy (KE)	$KE = \frac{1}{2} m \cdot v^2$	Joules (J)
Gravitational Potential Energy	$PE = m \cdot g \cdot h$	Joules (J)
Work & Power	$W = F \cdot d \quad \quad P = W / t$	Joules (J), Watts (W)
Ohm's Law (Electricity)	$V = I \cdot R \quad \quad P = V \cdot I$	Volts (V), Amperes (A)
Ideal Gas Law (Chemistry)	$P \cdot V = n \cdot R \cdot T$	Atm, Liters, Kelvin

⚡ Need to check your physics calculations? Solve force & velocity on [CalcSolver](#)

[Launch Physics Solver →](#)

 Statistics, Probability & Student GPA Guide

Quick statistical formulas, percentage change, and student grade tracking on [CalcSolver](#).

Arithmetic Mean (Average)

$$\bar{x} = (\sum x) / n$$

Standard Deviation (Sample)

$$s = \sqrt{[\sum (x - \bar{x})^2 / (n - 1)]}$$

Combinations (nCr)

$$nCr = n! / [r! (n - r)!]$$

Permutations (nPr)

$$nPr = n! / (n - r)!$$

**How to Calculate Weighted Grades & High School / College GPA**

Weighted Final Grade: $\text{Final} = (\text{Score}_1 \times \text{Weight}_1) + (\text{Score}_2 \times \text{Weight}_2) + \dots$

4.0 Scale Conversion: A = 4.0 | B = 3.0 | C = 2.0 | D = 1.0 | F = 0.0

Percentage Change: $\% \text{ Change} = [(\text{New Value} - \text{Old Value}) / \text{Old Value}] \times 100$

 Frequently Asked Questions (FAQ)**• Can I use CalcSolver for AP Physics, Geometry, and Statistics exams?**

Yes! CalcSolver includes specialized modes for right-triangle trigonometry, scientific notation, logarithmic conversions, standard deviation, and quadratic formulas.

• Is SolveCalc and CalcSolver suitable for school Chromebooks?

Absolutely. CalcSolver runs directly in modern browser tabs with zero installation required, minimal battery drain, and full responsive support for touchscreen tablets and laptops.

• How do I access the advanced scientific functions?

Just navigate to [calcsolver.pro](#). The interactive calculator features trigonometric toggles (DEG/RAD), history recall, powers, square roots, and constant values.

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