

The Math Mastery Cheat Sheet

10 "Must-Know" Formulas to Save Your Grade (K-12 Essentials)

Mathematics is a language of patterns. Once you know the "sentences" (formulas), the problems solve themselves. At CoreMastery Academy, we help students see the logic behind the numbers.

1. Percent Change (Everyday Math)

Formula: $[(\text{New} - \text{Old}) / \text{Old}] \times 100$

- Use: Calculate discounts, raises, or score improvements.

2. Area of a Triangle

Formula: $\text{Area} = 1/2 \times \text{Base} \times \text{Height}$

- Use: Finding space inside any 3-sided shape.

3. Pythagorean Theorem

Formula: $a^2 + b^2 = c^2$

- Use: Finding the missing side of a Right Triangle.

4. Slope-Intercept Form (Graphing)

Formula: $y = mx + b$

- Use: The foundation of all linear algebra and graphing.

5. The Quadratic Formula

Formula: $x = [-b \pm \sqrt{(b^2 - 4ac)}] / 2a$

- Use: The "Emergency Button" for Grade 10-11 equations.

6. Mean / Average

Formula: $\text{Sum of Items} / \text{Total Count}$

- Use: Finding your overall grade or average performance.

7. Volume of a Cylinder

Formula: $V = \pi r^2 h$

- Use: Calculating space in cans, pipes, or tanks.

8. Simple Interest (Business Math)

Formula: $I = Prt$

- Use: How money grows in savings or loans.

9. The Distance Formula

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

- Use: Finding the exact gap between two points on a map.

10. BEDMAS (The Golden Rule)

Rule: Brackets > Exponents >

Div/Mult > Add/Sub

- Use: The required order to solve any complex math problem.



**READY TO MASTER THE LOGIC
BEHIND THE NUMBERS?**

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