

GED Math Formula Sheet (Simplified + Examples) 🧠

📊 1. NUMBER BASICS

Percent

Formula:

$$\text{Percent} = (\text{Part} \div \text{Whole}) \times 100$$

Example:

$$20 \text{ out of } 50 \rightarrow (20 \div 50) \times 100 = 40\%$$

💡 Tip: Percent means “out of 100”

Ratio

Formula:

$$a : b = a \div b$$

💡 Tip: Always keep units the same before comparing

📊 2. ALGEBRA

Linear Equation

Form:

$$ax + b = c$$

Example:

$$2x + 4 = 10 \rightarrow x = 3$$

💡 Tip: Move numbers to one side, then isolate x

Slope

Formula:

$$m = (y_2 - y_1) \div (x_2 - x_1)$$

💡 Tip: “Rise over Run”

Slope-Intercept Form

Formula:

$$y = mx + b$$

- m = slope
- b = y-intercept

Quadratic Formula

Formula:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

💡 Tip: Use when equation is in form $ax^2 + bx + c = 0$

3. GEOMETRY

Area

- Rectangle = length \times width
- Triangle = $(1/2) \times$ base \times height
- Circle = πr^2

💡 Tip: Use $\pi \approx 3.14$

Perimeter

- Rectangle = $2(\text{length} + \text{width})$
 - Circle (Circumference) = $2\pi r$
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Pythagorean Theorem

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

💡 Tip: Only works for right triangles

Volume

- Rectangular Prism = length \times width \times height
 - Cylinder = $\pi r^2 h$
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4. DATA & STATISTICS

Mean (Average)

$$\text{Mean} = \frac{\text{sum of values}}{\text{total number}}$$

Median

Middle value after arranging numbers in order

Probability

Probability = favorable outcomes \div total outcomes

💡 Tip: Answer is always between 0 and 1

🚀 5. WORD PROBLEM SHORTCUTS

Distance

Distance = Speed \times Time

Simple Interest

$I = P \times R \times T$

- P = principal
 - R = rate
 - T = time
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Percent Change

Percent Change = (New – Old) \div Old \times 100


⚠️ COMMON MISTAKES (IMPORTANT)

- Forgetting units
 - Using wrong formula
 - Not reading question carefully
 - Calculator errors
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🧠 QUICK STRATEGY TO SOLVE ANY QUESTION

1. Read the question carefully
 2. Identify what is asked
 3. Choose the correct formula
 4. Solve step-by-step
 5. Check your answer
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 **FINAL TIP**

 Don't just memorize formulas — understand **when to use them**

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apcoremath.com

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