

Tips for Attaining High School Equivalency on the GED® Mathematical Reasoning Test

The GED® Mathematical Reasoning test assesses a wide range of math skills and concepts because the test measures both high school equivalency and readiness for college and career. Achieving the level of performance required for high school equivalency does not necessarily require a student to master the entire range of content covered on the test. This resource provides tips that can help instructors to focus on the math skills and performance benchmarks most critical in helping students attain the high school equivalency performance level in math.

CONSISTENCY

Increase students' consistency in performing math skills. In many cases, the difference between **passing** and **not passing** is that passers perform more consistently, demonstrating deeper understanding of skills they already possess.

FLUENCY

Increase students' fluency in the basic mathematical operations (e.g., addition, subtraction, multiplication, division, roots, and exponents), mathematical properties (e.g., commutative, associative, distributive), the order of operations (PEMDAS), and the concept of "absolute value."

NUMBER SENSE

Improve students' general "number sense"

- Students should have a good understanding of the relative size of numbers, helping them to judge the reasonableness of proposed solutions.
- "Number sense" includes being able to order different values on a number line, even if those values are expressed differently (for example, as decimals, fractions, or mixed numbers).

ALGEBRAIC PROBLEM SOLVING

Consistency, fluency and number sense are the basic building blocks to support students' ability to succeed in the approximately 50% of the test to measure algebraic problem solving.

- Students should have the ability to perform basic computations with or without a calculator
- Students should be able to set up and solve inequations and inequalities
- Students should be able to translate from written terms to mathematical terms

MEASUREMENT WITH GEOMETRIC FIGURES

Increase students' confidence in working with measurement of geometric figures to compute perimeter, area, volume and surface area. Key skills include

- Solving problems with different unknowns. For example, students should be able to compute area given the length and width of a geometric figure and also to compute length given the area and width of a figure.
- Looking at realistic situations and seeing how mathematics can be used to represent those situations. For example, determining the cost of carpeting an irregularly shaped room involves determining the area and multiplying that by the cost of the carpet per unit. This type of problem also might involve making changes to the units of measurement involved (for example, the room measurements might be expressed in square feet but the carpet might be priced by the square yard).

WORKING IN A COORDINATE PLANE

Help students develop strong skills in working in a coordinate plane. Key skills include

- Identifying the elements of the coordinate plane (axes, independent and dependent variables, ordered pairs, etc.).
- Writing the equation of a straight line and going back-and-forth between different equation formats (e.g., point-slope form, slope intercept form, etc.).
- Interpreting the meaning of different elements of the equation of a line (e.g., What does the slope represent? What does the y-intercept represent?).
- Looking at realistic situations and determining how the equation of a line represents those situations.

INTERPRETING GRAPHICS

Help students interpret various tables, charts, and graphs, to explain what they mean, and to move between different ways of expressing the same data (for example, in text, or in a table or in a graph).

MEAN, MEDIAN, & MODE

Ensure that students are able to demonstrate basic skills with measures of central tendency, including computing and interpreting mean, median, and mode.