Help with the Graduate Equivalency Diploma

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More FREE help available from my website at www.mathinlivingcolor.com

This page comes from the McGraw Hill Test Information page

The Mathematics Test consists of two parts: Part I examines a test-taker's ability to solve problems with complex calculations in realistic settings. The Casio *fx*-260 scientific calculator is provided to aid with calculations for this part of the test. The calculator is not provided for Part II, which examines a test-taker's ability to solve problems using estimation, mental math, and paper and pencil.

Cognitive Levels and Content Areas

Both parts of the Mathematics Test contain 25 items that are drawn from the following content areas and skills:

NUMBER OPERATIONS AND NUMBER SENSE (20–30%)

Representing and using numbers in a variety of equivalent forms (integer, fraction, decimal, percent, exponential, and scientific) in real world and mathematical problem situations
Using number sense for whole numbers, fractions, decimals, integers, and rational numbers

Analyzing, explaining, and applying ratios, proportions, and percents in a wide variety of situations

Using order relations for whole numbers, fractions, decimals, integers, and rational numbers

Selecting the appropriate operation to represent problem situations

Relating the basic arithmetic operations to one another

Computing with whole numbers, fractions, decimals, and integers (with a calculator, with no restrictions, and mentally or with pencil and paper with certain restrictions)
Using, analyzing, and explaining procedures for making estimates with whole numbers, fractions, decimals, percents, and square roots
Using estimation to solve problems and to assess the reasonableness of the answer

MEASUREMENT AND GEOMETRY (20–30%)

Modeling and solving problems using the concepts of perpendicularity, parallelism, congruence, and similarity of geometric figures
Using spatial visualization to describe and analyze geometric figures

Using the Pythagorean Theorem and similarity to model and solve problems

Finding, using, and interpreting the slope of a line, the *y*-intercept of a line, and the intersection of two lines
Using coordinates to design and describe geometric figures or translations/rotations of geometric figures
Identifying and selecting appropriate units of metric and customary measures

Converting and estimating units of metric and customary measure

Solving and estimating solutions to problems involving length, perimeter, area, surface area, volume, angle measurement, capacity, weight, and mass
Using uniform rates in problem situations

Reading and interpreting scales, meters, and gauges

Predicting the impact of changes in linear dimension on the perimeter, area, and volume of figures

DATA ANALYSIS, STATISTICS, AND PROBABILITY (20–30%)

Constructing, interpreting, and drawing inferences from tables, charts, and graphs

Making inferences and convincing arguments that are based on data analysis

Evaluating arguments that are based on data analysis, including distinguishing between correlation and causation

Representing data graphically in ways that make sense and are appropriate to the context

Applying measures of central tendency (mean, medium, mode) and analyzing the effect of changes in data on these measures

Using an informal line of best fit to predict from data

Applying and recognizing the role of sampling and the impact of bias on statistical claims

Making predictions that are based on experimental or theoretical probabilities, including listing possible outcomes

Using and interpreting a frequency distribution of outcomes

Comparing and contrasting different sets of data on the basis of measures of central tendency and dispersion

ALGEBRA, FUNCTIONS, AND PATTERNS (20–30%)

Analyzing and representing situations involving variable quantities with tables, graphs, verbal descriptions, and equations

Recognizing that a variety of problem situations may be modeled by the same function or type of function

Converting between different representations, such as tables, graphs, verbal descriptions, and equations

Creating and using algebraic expressions and equations to model situations and solve problems

Evaluating formulas and functions

Solving equations and systems of linear equations

Recognizing and using direct and indirect variation

Analyzing tables and graphs to identify and generalize patterns and relationships

Analyzing and using functional relationships to explain how a change in one quantity results in change in the other quantity, including linear, quadratic, and exponential functions

PROCEDURAL (15–25%)

Selecting and applying appropriate procedures correctly

Verifying and justifying the correctness of a procedure using concrete models or symbolic methods

Extending or modifying procedures to deal with factors inherent in problem settings

Using numerical algorithms

Reading and producing graphs and tables

Executing geometric constructions

Rounding numbers appropriately, including rounding up/down to represent a whole number answer as appropriate in a problem situation

Ordering lists of numbers

CONCEPTUAL (25–35%)

Recognizing concepts

Labeling concepts

Generating examples and/or counter examples of concepts

Interrelating models, diagrams, and representatives of concepts

Identifying and applying principles

Knowing and applying facts and definitions

Comparing, contrasting, and integrating related concepts and principles

Recognizing, interpreting, and applying signs, symbols, and terms

Interpreting assumptions and relations