Miami Dade College

Course Description

EDE1045 | GKT Preparation for Mathematics Test | 2.00 credits

The student will review mathematics concepts in order to prepare to pass the General Knowledge Test Mathematics section. The student will refine their knowledge of number sense, concepts, and operations; geometry and measurement; algebraic thinking and the coordinate plane; and statistics, probability, and data interpretation.

Course Competencies

Competency 1: The student will review number sense, concepts, and operations by:

1. Comparing real numbers and identifying their locations on a number line
2. Solving real-world problems involving the four operations with rational numbers
3. Evaluating expressions involving order of operations

Competency 2: The student will apply concepts of geometry and measurement by:

1. Identifying and classifying simple two-and three- dimensional figures according to their mathematical properties
2. Solving problems involving ratio and proportion (i.e., scaled drawings, models, real-world scenarios)
3. Determining an appropriate measurement unit and form (i.e., scientific notation) for real-world problems involving length, area, volume, and mass
4. Solving real-world measurement problem including fundamental units (i.e, length, mass, time), derived units (i.e., miles per hour, dollars per gallon), and unit conversions

Competency 3: The student will use knowledge of algebraic thinking and the coordinate plane by:

1. Determining whether two algebraic expressions are equivalent by applying properties of operations or equality
2. Identifying an algebraic expression, equation, or inequality that models a real-world situation
3. Solving equations and inequalities (i.e., linear, quadratic) graphically or algebraically
4. Determining and solving equations or inequalities, graphically or algebraically, in real- world problems
5. Graphing and interpreting a linear equation in real-world problems (i.e., using data to plot points, explaining slope and y-intercept, determining additional solutions)
6. Identifying relations that satisfy the definition of a function
7. Compare the slopes of two linear functions represented algebraically and graphically

Competency 4: The student will apply knowledge of probability, statistics, and data interpretation by:

1. Analyzing data presented in various forms (i.e., histograms, bar graphs, circle graphs, pictographs, line plots, tables) to solve problems
2. Analyzing and evaluating how the presentation of data can lead to different or inappropriate interpretations in the context of a real-world situation
3. Calculating range, mean, median, and mode of data sets
4. Interpreting the meaning of measures of central tendency (i.e., mean, median, mode) and dispersion (i.e., range, standard deviation) in the context of a real-world situation
5. Analyzing and evaluating how the selection of statistics (i.e., mean, median, mode) can lead to different or inappropriate interpretations in the context of a real-world situation
6. Solving and interpreting real-world problems involving probability using counting procedures, tables, and tree diagrams
7. Inferring and analyzing conclusions from sample surveys, experiments, and observational studies

Learning Outcomes:

- Use quantitative analytical skills to evaluate and process numerical data
- Solve problems using critical and creative thinking and scientific reasoning
- Use computer and emerging technologies effectively