Math 116
Challenge Exam Information
Mathematics Department
San Diego Miramar College

Do not attempt the Math 116 Challenge Exam unless you are confident that you can successfully answer questions regarding the following topics.

- Recognize and evaluate linear functions and perform application problems relating to business and the natural sciences.

- Perform algebraic operations involving functions, including inverses.

- Analyze and interpret the relationship between polynomial functions, their properties and their graphs.

- Determine all the zeros of a polynomial by applying root-finding techniques.

- Analyze and interpret the graphs of algebraic functions including square root, cube root, absolute value, piecewise functions and rational functions.

- Solve and graph non-linear inequalities.

- Apply and analyze rigid and non-rigid transformations to algebraic, exponential and logarithmic functions.

- Solve equations involving logarithmic and exponential functions, including application problems.

- Modeling algebraic, exponential and logarithmic functions.

- Perform algebraic operation with matrices.

- Solve systems of equations using various techniques.

- Solve linear programming problems to find optimum points of operations.