
SECTION HEADING

MATH 0111: Co-requisite with College Algebra

Description

Co-requisite with College Algebra Supports students who qualify with additional review, just-in-time learning, deeper conceptual development, repetition over time, and learning skills and habits required to be successful with the corresponding college level MATH 1111 College Algebra Math course taken concurrently.

Credits

2

Prerequisite

ACT Math score of 19 or placement by multiple measures

Corequisite

None

Topics to be Covered

1. Growth Mindset, Study Skills and Habits
2. Introduction to Functions and Graphs
3. Linear Functions and Equations and Inequalities
4. Quadratic Functions and Equations
5. Other Non-linear Functions and Equations
6. Inverses, Exponential and Logarithmic Functions and Equations
7. Systems of Equations and Inequalities and Matrices
8. Sequences and Series

Learning Outcomes

Process Standards

1. Solve authentic problems by applying two or more mathematical strategies or concepts and using multiple steps.
2. Interpret and communicate quantitative information and mathematical concepts using appropriate language for the context.
3. Present written or verbal justifications that include appropriate discussion of the mathematics involved.
4. Use estimation skills to predict and check answers to mathematical problems in order to determine reasonableness of solutions.
5. Make sense of problems, develop strategies to find solutions, and persevere in solving them.
6. Read and interpret authentic texts containing quantitative information.
7. Use technology when appropriate for a given context.

Topical Standards

8. Develop study skills, habits, and perseverance needed in college Math courses.
9. Write algebraic expressions, equations, and inequalities to represent contextualized applications.
10. Recognize and graph linear functions.
11. Solve literal equations.
12. Solve 2×2 systems of linear equations.
13. Use rules of exponents to simplify expressions.
14. Perform operations on polynomial expressions
15. Factor polynomials using a variety of methods.
16. Perform algebraic operations with radical expressions.
17. Convert expressions between radical form and exponential form.
18. Simplify and perform operations on rational expressions.

Section Heading

19. Solve rational, radical, and quadratic equations analytically.
20. Solve applied mathematics problems involving linear, quadratic, rational, and radical models.
21. Solve a variety of math problems using multiple representations including tables, graphs, words and symbols.
22. Interpret solutions of problems in context and determine if quantitative results are reasonable.
23. Translate between graphical, tabular, verbal and symbolic representations of functions and relations.
24. Identify the domain and range of functions and relations.
25. Use function notation and evaluate functions for specified domain values.

Credit Details

Lecture: 2

Lab: 0

OJT: 0

MnTC Goal Area(s): None