Algebra 1A (9000A) Course Overview Curriculum Document

Course Description

Algebra 1A builds students' use of algebraic symbols to describe mathematical phenomena with an emphasis on developing conceptual understanding leading to procedural fluency and application. This course provides the foundation for the study of higher levels of mathematics along with its integration into other disciplines through foundational algebra and linear functions. This course is year one of a two year pathway - students will also be expected to take Algebra 1B upon completion of this course.

Credits	Prerequisites
1 (0.5 per semester)	
Board Approved	**Revised**
April 1998	May 2019, October 2021, June 2022, June 2023

Required Assessments

Semester 1

- Algebra 1A Summative 0.1: Manipulate Expressions: Standard 2
- Algebra 1A Summative 0.2: Function Analysis: Standard 1
- Algebra 1A Summative 0.3: Statistics and Probability: Standard 4
- Algebra 1A Summative 0.4: Manipulate Expressions: Standard 2
- Algebra 1A Summative 1.1: Manipulate Expressions: Standard 2
- Algebra 1A Summative 1.2: Solve Equations and Inequalities: Standard 3
- Algebra 1A Summative 1.3: Function Analysis: Standard 1

Semester 2

- Algebra 1A Summative 1.4: Function Analysis: Standard 1
- Algebra 1A Summative 2.1: Function Analysis: Standard 1
- Algebra 1A Summative 2.2: Function Analysis: Standard 1
- Algebra 1A Summative 2.3: Manipulate Expressions: Standard 2
- Algebra 1A Summative 2.4: Solve Equations and Inequalities: Standard 3
- Algebra 1A Summative 2.5: Solve Equations and Inequalities: Standard 3
- Algebra 1A Summative 2.6: Solve Equations and Inequalities: Standard 3

Textbooks/Resources

Kennedy, D., Milou, E., Thomas, C. D., Zbiek, R. M., & Cuoco, A. (2024). *enVision Algebra 1*. Paramus, NJ: Savvas Learning Company.

Course Essential Understandings	Course Relevance Question(s)
As a result of successfully completing this course, students will understand that: ● Algebraic symbols are used to describe mathematical phenomena with an emphasis on developing conceptual understanding leading to procedural fluency and application.	How can we represent patterns and relationships mathematically?

Unit Overviews

Unit Name	Unit Description	Unit Relevance Question	Instructional Standards	Assessed Standards
Unit #0 - Algebra Foundations	This unit reviews essential skills learned in previous classes. In order to be successful in Algebra 1A, students need to have prior knowledge in multiple areas of study. This unit will focus on strengthening the foundational skills of pre-algebra, including integer operations, evaluating expressions and understanding vocabulary.	● What ways do we use math in everyday life? ● What do we use in place of an unknown number? ● Why does order make a difference in mathematical operations?		**Standard 1: Function Analysis** M.8.F.A.1, A.2, A.3 **Standard 2: Manipulate Expressions** M.6.NS.C.5, C.6 M.6.EE.A.1, A.2, A.3, A.4 M.7.EE.A.1 M.7.NS.A.1, A.2, A.3 **Standard 4: Statistics and Probability** M.6.SP.A.1, A.2, A.3, A.4 M.7.SP.A.1, 2 M.7.SP.B.3, 4
Unit #1 - The Language of Algebra	Students will build foundational knowledge and vocabulary for the rest of the course. They will analyze data to interpret and communicate information from a variety of forms. Students will also recognize patterns and generate models to represent those patterns.	● How can information be displayed and how do we make sense of it? ● How can symbols be used to help us efficiently communicate? ● How does generalizing a situation help?	**Standard 1: Function Analysis** M.A.CED.A.4 M.SP.ID.B.6 **Standard 2: Manipulate Expressions** M.N.RN.A.1, 2 M.A.APR.A.1 **Standard 4: Statistics and Probability** M.SP.ID.A.1, 2, 3 M.SP.ID.B.5 M.SP.ID.C.8 M.SP.ID.C.9	**Standard 1: Function Analysis** M.N.Q.A.1, A.2, A.3 M.A.CED.A.1,A.2, A.3 M.F.BF.A.1 M.F.IF.A1, A.2, M.F.IF.B.4, B.5 M.F.IF.C.7a, C.9 **Standard 2: Manipulate Expressions** M.A.SSE.A.1, A.2 **Standard 3: Solve Equations and Inequalities** M.A.REI.B.3
Unit #2 - Linear Functions	Students will expand their understanding of functions and function families to investigate linear functions and use them in problem solving. They will apply their knowledge of	● Why do rates of change matter and how will they help me be a better consumer?	**Standard 1: Function Analysis** M.A.CED.A.2,3,4	**Standard 1: Function Analysis** M.A.CED.A.1

	expressions in the context of linear functions; additionally, they will model situations graphically, numerically, and through equation manipulation and analysis.	• How do Linear pictures, graphs, tables, and data “paint a thousand words?” • How can we move from physical Linear models to abstract thinking?	M.F.BF.A.1,2 M.F.IF.A.3 M.F.LE.A.1 M.F.BF.B.3 M.F.LE.B.5 M.N.Q.A.1,2,3 M.F.IF.A.1, A.2 M.IF.B.5,6 M.F.IF.C.7.a M.F.LE.A.1,3 **Standard 2: Manipulate Expressions** M.A.SSE.A.1 **Standard 3: Solve Equations and Inequalities** M.A.REI.D.12 **Standard 4: Statistics and Probability** M.SP.ID.B.6.c M.SP.ID.C.7	M.F.LE.A 2 M.F.IF.B.4 M.F.IF.C. C.9 **Standard 2: Manipulate Expressions** M.A.SSE.A.2 M.A.APR.A.1 **Standard 3: Solve Equations and Inequalities** M.A.REI.A.1 M.A.REI.B.3 M.A.REI.C.5,6 M.A.REI.D.10,11 **Standard 4:Statistics and Probability** M.SP.ID.B.6.a