

2023-2024

Advanced Algebra 3 Course Guide

#2241/2242 Advanced Algebra 3

Course Description

This is a one-year non-honors level course designed to build upon the concepts presented in Algebra 2. Students will apply Algebra 2 concepts in real-life contexts to strengthen and expand problem solving, numerical literacy and application skills in preparation for post-secondary choices including the world of work, college, technical training or the military. Mathematics topics that will be imbedded into the modules include: Functions (Linear, Quadratics, Exponentials, Logarithms, Rational, and Polynomial); Geometry and Measurement, Linear Programming, Probability and Data Analysis. Financial Math is a strong second semester focus. Teacher and student materials can be found in the Math Resources SharePoint. Graphing Calculators are required.

Advance Algebra 3

Advanced Algebra 3 – Semester 1		
Topics		Resource
College and Career Readiness 7 weeks	Arithmetic-Numbers and Operations	S1-Q1, week #1
	Pre-Algebra	S1-Q1, week #2
	Elementary Algebra	S1-Q1, week #3
	Intermediate Algebra	S1-Q1, week #4
	Coordinate Geometry	S1-Q1, week #5
	Plane Geometry/Trigonometry	S1-Q1, week #6-7
Medical Math 9 weeks	Number Basics	S1-Q2, Ch 1
	Key Calculations	S1-Q2, Ch 2
	Measurement Systems	S1-Q2, Ch 3
	Medications	S1-Q2, Ch 4
	Temperature and Time	S1-Q2, Ch 5
	Charts and Graphs	S1-Q2, Ch 6

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Advanced Algebra 3 – Semester 2		
Topics		Resource
Finance Consumer Math 12 weeks	Earning Money	S2-Q3, Ch 1
	Buying Food	S2-Q3, Ch 2
	Shopping for Clothes	S2-Q3, Ch 3
	Managing a Household	S2-Q3, Ch 4
	Buying and Maintaining a Car	S2-Q3, Ch 5
	Working with Food	S2-Q3, Ch 6
	Improving your Home	S2-Q3, Ch 7
	Traveling	S2-Q3, Ch 8
	Budgeting your Money	S2-Q3, Ch 9
	Interest	S2-Q3, Ch 10
	Taxes	S2-Q3, Ch 11
Project Based Finance Find Guest Speakers	Life After High School <ul style="list-style-type: none"> ○ Job possibilities immediately after HS ○ Summer School Opportunities ○ Community Volunteering ○ Career Choices* ○ College/trade/certification for those career choices 	
	Location <ul style="list-style-type: none"> ○ Cost of living around the nation ○ Population statistics ○ Renting an Apartment ○ Cost of moving 	
	Budgeting <ul style="list-style-type: none"> ○ Salary comparison with different education levels ○ Grocery shopping budgeting ○ Monthly luxury budgeting 	
	Buying a Car <ul style="list-style-type: none"> ○ Cost of a car 	
	Scenarios (Students are given 4 scenarios of different lives: - education level, careers, location, and budget)	

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Possible Optional Topics and Resources – Semester 2		
Unit - Finance 12 weeks	Overview of Personal Finance	Ch. 1
	The Financial Plan	Ch. 2
	Financial Decision Making	Ch. 3
	Budget and balance Sheets – Your Personal Financial Statements	Ch. 4
	Obtaining and Protecting your Credit	Ch. 5
	Exponential and Logarithmic Functions	Ch. 6
	The Value of Money	Ch. 7
	Personal Loans and Purchasing Decisions	Ch. 8
	Financial Assets and Liabilities	Ch. 9
	Credit Cards and Other Forms of Credit	Ch. 10
Unit – Health Issues 10 weeks	Statistics	Ch. 22
	Metric System	Ch. 23
	Human Body Math	Ch. 24
	Optimizing with Linear Programming	Ch. 25
	Set Theory	Ch. 26
Unit - Technology	Systems of Equations	Ch. 16
	Equation of a Circle	Ch. 17
	Modular Arithmetic	Ch. 18
	Random Numbers	Ch. 19
	Cryptography and Check Digits	Ch. 20
	Functions and Their Graphs	Ch. 21
Unit – Fine Arts	Polynomials	Ch. 11
	Matrices	Ch. 12
	Patterns and Series	Ch. 13
	Fractals	Ch. 14
	Parametric Equations and Polar Equations of Conics	Ch. 15