



PATHWAY **2** CAREERS

P2C Math: Algebra I

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Massachusetts



Total # of Days 126-185

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1. ALGEBRA FOUNDATIONS						8-12	
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	A-1.2	Quantities and Measurement	Exploration	AI.N-Q.A.1, AI.N-Q.A.2, AI.N-Q.A.3	1, 2, 4	Multiple	1
	A-1.3	Applying Dimensional Analysis	Application	AI.N-Q.A.1	4, 6, 7	Dental Laboratory Technicians	1-2
	A-1.4	Modeling with Quantities	Application	AI.N-Q.A.1, AI.N-Q.A.2	1, 2, 4	Terrazzo Workers and Finishers	1-2
	A-1.5	Precision and Accuracy	Application	AI.N-Q.A.1, AI.N-Q.A.3	1, 2, 4	Environmental Science and Protection Technicians	1-2
	A-1.6	Algebraic Expressions	Exploration	AI.A-SSE.A.1.a, AI.A-SSE.A.1.b, AI.A-SSE.A.2	1, 2, 7	Multiple	1
	A-1.7	Writing and Simplifying Algebraic Expressions	Exploration	AI.A-SSE.A.1.a, AI.A-SSE.A.1.b, AI.A-APR.A.1.b	2, 4, 7	Multiple	1
	A-1.8	Structure of Expressions	Application	AI.A-SSE.A.1.a, AI.A-SSE.A.1.b	1, 4, 7	Economics Teachers, Postsecondary	1-2
P	A-1-P	Seeing Structure in Expressions	Project (Information Technology)	AI.A-SSE.A.1.a, AI.A-SSE.A.1.b, AI.F-BF.B.3	1, 2, 4, 7	Database Architects	3-6
2. SOLVING EQUATIONS						7-11	
	A-2.1	Solving One- and Two-Step Equations	Exploration	AI.A-REI.A.1, AI.A-REI.D.12	1, 2, 7	Multiple	1
	A-2.2	Writing Linear Equations	Application	AI.A-CED.A.1, AI.A-REI.A.1, AI.A-REI.D.12, AI.F-BF.A.1.a	1, 2, 4	Credit Counselors	1-2
	A-2.3	Solving Multi-Step Equations	Exploration	AI.A-REI.A.1, AI.A-REI.D.12	1, 2, 7	Multiple	1

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	Title	Type	Standard(s)	Mathematical Practices	Career(s)	Number of Days
A-2.4	Solving Linear Equations with a Variable on One Side	Application	AI.A-CED.A.1, AI.A-CED.A.2, AI.A-CED.A.3, AI.A-REI.A.1, AI.A-REI.D.12, AI.F-BF.A.1.a, AI.F-LE.A.2	1, 2, 4	Veterinarians	1-2
A-2.5	Solving Linear Equations with a Variable on Both Sides	Application	AI.A-CED.A.1, AI.A-REI.A.1, AI.A-REI.D.12, AI.F-BF.A.1.a	1, 4, 5	Bookkeeping, Accounting, and Auditing Clerks	1-2
A-2.6	Introduction to Literal Equations and Formulas	Exploration	AI.A-CED.A.1, AI.A-CED.A.4, AI.A-REI.A.1, AI.A-REI.D.12, AI.F-BF.A.1.a	2, 7, 8	Multiple	1
A-2.7	Solving Literal Equations and Formulas	Application	AI.A-CED.A.1, AI.A-CED.A.4, AI.A-REI.A.1, AI.F-BF.A.1.a, AI.N-Q.A.1	4, 6, 7	Electricians	1-2
3. SOLVING INEQUALITIES						9-13
A-3.1	Inequalities in One Variable	Exploration	AI.A-CED.A.1, AI.A-REI.D.12, AI.F-BF.A.1.a	4, 5, 7	Multiple	1
A-3.2	Writing Linear Inequalities in One Variable	Exploration	AI.A-CED.A.1, AI.A-CED.A.3, AI.A-REI.D.12, AI.F-BF.A.1.a	1, 2, 7	Multiple	1
A-3.3	Solving Linear Inequalities in One Variable	Application	AI.A-CED.A.1, AI.A-CED.A.3, AI.A-REI.D.12, AI.F-BF.A.1.a	1, 2, 5	Property, Real Estate, and Community Association Managers	1-2
A-3.4	Solving and Graphing Compound Inequalities–And	Exploration	AI.A-CED.A.1, AI.A-REI.D.12, AI.F-BF.A.1.a	1, 2, 7	Multiple	1
A-3.5	Solving and Graphing Compound Inequalities–Or	Exploration	AI.A-CED.A.1, AI.A-REI.D.12, AI.F-BF.A.1.a	1, 2, 7	Multiple	1
A-3.6	Using Compound Inequalities	Application	AI.A-CED.A.1, AI.A-CED.A.3, AI.A-REI.D.12, AI.F-BF.A.1.a	1, 2, 4	Billing and Posting Clerks	1-2
A-3.7	Absolute Value Equations and Inequalities	Exploration	AI.A-CED.A.1, AI.A-REI.B.3.a, AI.A-REI.D.12, AI.F-BF.A.1.a, AI.F-IF.C.7.b	1, 2, 7	Multiple	1

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	Title	Type	Standard(s)	Mathematical Practices	Career(s)	Number of Days
A-3.8	Writing and Solving Absolute Value Inequalities	Application	AI.A-CED.A.1, AI.A-CED.A.3, AI.A-REI.B.3.a, AI.A-REI.D.12, AI.F-BF.A.1.a	1, 2, 4	Exercise Physiologists	1-2
A-3.9	Solving Inequalities Graphically	Application	AI.A-CED.A.1, AI.A-CED.A.3, AI.A-REI.B.3.a, AI.A-REI.D.12, AI.F-BF.A.1.a	1, 2, 4	Business Operations Specialists, All Other	1-2
4. FUNCTIONS AND LINEAR FUNCTIONS						14-21
A-4.1	Relations and Functions	Exploration	AI.F-IF.A.1, AI.F-IF.A.2, AI.F-IF.B.5	1, 4, 8	Multiple	1
A-4.2	Features of Functions	Exploration	AI.A-CED.A.2, AI.A-REI.D.10, AI.F-IF.B.4, AI.F-IF.B.5, AI.F-IF.C.7.a, AI.F-LE.A.2	2, 3, 7	Multiple	1
A-4.3	Identifying Linear Functions	Exploration	AI.A-CED.A.2, AI.A-REI.A.1, AI.A-REI.D.10, AI.F-BF.A.1.b, AI.F-IF.B.4, AI.F-IF.B.5, AI.F-IF.C.7.a, AI.F-LE.A.1.b, AI.F-LE.A.2	2, 7, 8	Multiple	1
A-4.4	Rate of Change	Exploration	AI.A-CED.A.2, AI.A-CED.A.3, AI.A-REI.D.10, AI.F-BF.A.1.a, AI.F-BF.A.1.b, AI.F-IF.B.4, AI.F-IF.B.6, AI.F-IF.C.9, AI.F-LE.A.1.b, AI.F-LE.A.2	1, 2, 7	Multiple	1
A-4.5	Standard Form and Slope-Intercept Form	Exploration	AI.A-CED.A.2, AI.A-REI.A.1, AI.A-REI.D.10, AI.F-IF.B.4, AI.F-IF.C.7.a, AI.F-LE.A.2	1, 2, 7	Multiple	1
A-4.6	Using the Point-Slope Form of a Line	Application	AI.A-CED.A.2, AI.A-CED.A.4, AI.A-REI.D.10, AI.F-IF.B.4	1, 2, 4, 7	Social and Community Service Managers	1-2
A-4.7	Equations of Parallel and Perpendicular Lines	Exploration	AI.A-CED.A.2, AI.A-REI.D.10, AI.F-BF.A.1.a, AI.F-BF.A.2, AI.F-IF.B.4	2, 3, 7	Multiple	1-2
A-4.8	Graphs of Linear Functions	Exploration	AI.A-CED.A.2, AI.A-REI.A.1, AI.A-REI.D.10, AI.F-BF.A.1.a, AI.F-BF.A.1.b, AI.F-BF.A.2, AI.F-IF.B.4, AI.F-IF.C.7.a, AI.F-LE.B.5	1, 4, 7	Multiple	1
A-4.9	Rate of Change of Linear Functions	Application	AI.F-IF.B.4, AI.F-IF.B.6, AI.F-IF.C.9, AI.F-LE.B.5	1, 2, 4	Fitness Trainers and Aerobics Instructors	1-2
A-4.10	Representations of Linear Functions	Application	AI.A-CED.A.2, AI.A-CED.A.3, AI.A-REI.A.1, AI.F-BF.A.1.a, AI.F-BF.A.1.b, AI.F-IF.C.7.a, AI.F-LE.A.1.b, AI.F-LE.A.2	1, 2, 4	Geological and Petroleum Technicians	1-2

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	A-4.11	Using Graphs of Linear Functions	Application	AI.A-CED.A.2, AI.A-CED.A.3, AI.A-REI.A.1, AI.A-REI.D.10, AI.F-BF.A.1.a, AI.F-IF.B.4, AI.F-IF.B.6, AI.F-IF.C.7.a, AI.F-LE.A.1.a, AI.F-LE.A.2	5, 6, 8	Hydrologists	1-2
	A-4.12	Scatter Plots and Lines of Fit	Exploration	AI.A-CED.A.2, AI.A-REI.D.10, AI.F-IF.B.4, AI.F-LE.B.5, AI.S-ID.B.6.a, AI.S-ID.B.6.b, AI.S-ID.B.6.c, AI.S-ID.C.7, AI.S-ID.C.8, AI.S-ID.C.9	2, 5, 7	Multiple	1
	A-4.13	Applying Scatter Plots and Lines of Fit	Application	AI.F-LE.B.5, AI.S-ID.B.6.a, AI.S-ID.B.6.c, AI.S-ID.C.7	1, 2, 4, 5	Cost Estimators	1-2
	A-4.14	Analyzing Lines of Fit	Application	AI.F-IF.B.4, AI.F-IF.B.6, AI.F-LE.B.5, AI.S-ID.B.6.a, AI.S-ID.B.6.b, AI.S-ID.B.6.c, AI.S-ID.C.7, AI.S-ID.C.8, AI.S-ID.C.9	1, 2, 4, 7	Financial Managers	1-2
P	A-4-P	Creating Equations	Project (Information Technology)	AI.A-CED.A.1, AI.A-CED.A.2, AI.A-CED.A.4, AI.A-REI.D.10, AI.A-REI.D.12, AI.A-SSE.A.1.a, AI.A-SSE.A.1.b, AI.A-SSE.A.2, AI.F-BF.A.1.a, AI.F-IF.B.4	3, 5, 6, 7	Software Developers	3-6

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	A-5.1	Solving Systems of Linear Equations by Graphing	Exploration	AI.A-CED.A.2, AI.A-CED.A.3, AI.A-REI.A.1, AI.A-REI.D.10, AI.A-REI.D.12, AI.F-IF.B.4	1, 2, 7	Multiple	1
	A-5.2	Applying Systems of Linear Equations	Application	AI.A-CED.A.2, AI.A-CED.A.3, AI.A-REI.C.5, AI.A-REI.D.10, AI.A-REI.D.12, AI.F-IF.B.4	2, 4, 5	Chefs and Head Cooks	1-2
	A-5.3	Solving Linear Equations in One Variable by Graphing	Exploration	AI.A-CED.A.3, AI.A-REI.A.1, AI.A-REI.C.6, AI.A-REI.D.11, AI.A-REI.D.12, AI.F-LE.A.1.a	1, 2, 7	Multiple	1
	A-5.4	Solving Systems of Linear Equations by Substitution	Exploration	AI.A-CED.A.3, AI.A-REI.D.12	1, 2, 7	Multiple	1
	A-5.5	Solving Systems of Linear Equations by Elimination	Exploration	AI.A-CED.A.3, AI.A-REI.C.5, AI.A-REI.D.12	1, 2, 7	Multiple	1
	A-5.6	Writing and Solving Systems of Linear Equations	Application	AI.A-CED.A.3, AI.A-REI.C.5, AI.A-REI.D.12	1, 2, 4	Software Developers, Applications	1-2

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A-5.7	Special Systems of Linear Equations	Exploration	AI.A-CED.A.3, AI.A-REI.C.5, AI.A-REI.D.11, AI.A-REI.D.12	1, 2, 7	Multiple	1
A-5.8	Graphing Linear Inequalities in Two Variables	Exploration	AI.A-CED.A.2, AI.A-CED.A.3, AI.A-REI.D.12, AI.F-IF.C.7.a	1, 2, 7	Multiple	1
A-5.9	Writing and Using Linear Inequalities in Two Variables	Application	AI.A-CED.A.3, AI.A-REI.D.12	1, 2, 4	Soil and Plant Scientists	1-2
A-5.10	Graphing Systems of Linear Inequalities	Exploration	AI.A-CED.A.2, AI.A-CED.A.3, AI.A-REI.C.6, AI.A-REI.D.10, AI.A-REI.D.12, AI.F-IF.B.4	1, 6, 7	Multiple	1-2
A-5.11	Applying Systems of Linear Inequalities	Application	AI.A-CED.A.3, AI.A-REI.D.12	4, 5, 6	Industrial Engineers	1-2
P A-5-P	Reasoning with Equations and Inequalities	Project (Information Technology)	AI.A-REI.A.1, AI.A-REI.D.11, AI.A-REI.D.12	2, 4, 6	Geographic Information Systems Technologists and Technicians	3-6

6. EXPONENTS AND EXPONENTIAL FUNCTIONS

10-17

A-6.1	Properties of Exponents	Exploration	AI.A-SSE.A.2, AI.N-RN.A.1, AI.N-RN.A.2	1, 2, 7	Multiple	1
A-6.2	Understanding Radicals and Rational Exponents	Exploration	AI.A-REI.D.11, AI.N-RN.A.1, AI.N-RN.A.2	1, 2, 7	Multiple	1-2
A-6.3	Exponential Functions	Exploration	AI.F-BF.A.1.a, AI.F-BF.A.2, AI.F-BF.B.3, AI.F-IF.B.4, AI.F-IF.B.5, AI.F-IF.C.7.e	1, 2, 7	Multiple	1
A-6.4	Graphing Exponential Functions	Application	AI.F-IF.A.1, AI.F-IF.B.4, AI.F-IF.C.7.e, AI.F-LE.A.1.c	3, 4, 5	Accountants and Auditors	1-2
A-6.5	Exponential Growth and Exponential Decay Functions	Exploration	AI.A-SSE.A.1.a, AI.A-SSE.A.1.b, AI.A-SSE.B.3.c, AI.F-BF.A.1.a, AI.F-BF.A.2, AI.F-IF.C.8.b, AI.F-LE.A.1.a, AI.F-LE.A.1.c	1, 2, 7	Multiple	1-2

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A-6.6	Applying Exponential Growth	Application	AI.A-SSE.B.3.c, AI.F-IF.C.8.b, AI.F-LE.A.1.a, AI.F-LE.A.1.c	1, 7, 8	Animal Scientists	1-2
A-6.7	Applying Exponential Decay	Application	AI.A-SSE.B.3.c, AI.F-IF.C.8.b, AI.F-LE.A.1.a, AI.F-LE.A.1.c	1, 2, 4	Forensic Science Technicians	1-2
A-6.8	Solving Exponential Equations	Exploration	AI.A-CED.A.1, AI.A-REI.A.1, AI.A-REI.D.11, AI.A-SSE.B.3.c, AI.F-BF.A.1.a, AI.F-IF.C.8.b, AI.F-LE.A.1.a	1, 5, 7	Multiple	1
A-6.9	Applying Exponential Equations	Application	AI.A-CED.A.1, AI.A-REI.A.1, AI.A-SSE.B.3.c, AI.F-BF.A.1.a, AI.F-IF.C.8.b, AI.F-LE.A.1.a, AI.F-LE.A.1.c	1, 4, 5	Epidemiologists	1-2
A-6.10	Comparing Exponential Functions	Application	AI.A-SSE.B.3.c, AI.F-IF.C.8.b, AI.F-LE.A.1.a, AI.F-LE.A.1.c	2, 4, 7	Insurance Sales Agents	1-2
7. SEQUENCES						8-12
A-7.1	Understanding Sequences	Application	AI.F-BF.A.1.a, AI.F-BF.A.2, AI.F-IF.A.3	1, 4, 8	Biological Science Teachers, Postsecondary	1-2
A-7.2	Explicitly-Defined Arithmetic Sequences	Exploration	AI.A-CED.A.2, AI.A-CED.A.3, AI.F-BF.A.1.a, AI.F-BF.A.2, AI.F-IF.A.1, AI.F-IF.A.2, AI.F-IF.A.3, AI.F-IF.B.5, AI.F-LE.A.2	1, 2, 7	Multiple	1
A-7.3	Recursively-Defined Arithmetic Sequences	Exploration	AI.A-CED.A.2, AI.A-CED.A.3, AI.F-BF.A.1.a, AI.F-BF.A.2, AI.F-IF.A.1, AI.F-IF.A.2, AI.F-IF.A.3, AI.F-LE.A.2	1, 2, 7	Multiple	1
A-7.4	Applying Arithmetic Sequences	Application	AI.A-CED.A.2, AI.A-CED.A.3, AI.F-BF.A.1.a, AI.F-BF.A.2, AI.F-IF.A.3, AI.F-LE.A.2	1, 2, 4	General and Operations Managers	1-2
A-7.5	Explicitly-Defined Geometric Sequences	Exploration	AI.A-CED.A.1, AI.A-CED.A.2, AI.A-CED.A.3, AI.F-BF.A.1.a, AI.F-BF.A.2, AI.F-IF.A.1, AI.F-IF.A.2, AI.F-IF.A.3, AI.F-LE.A.2	2, 7, 8	Multiple	1
A-7.6	Recursively-Defined Geometric Sequences	Exploration	AI.A-CED.A.1, AI.A-CED.A.2, AI.A-CED.A.3, AI.F-BF.A.1.a, AI.F-BF.A.2, AI.F-IF.A.1, AI.F-IF.A.2, AI.F-IF.A.3, AI.F-LE.A.2	2, 7, 8	Multiple	1

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A-7.7	Applying Geometric Sequences	Application	AI.A-CED.A.1, AI.A-CED.A.2, AI.A-CED.A.3, AI.F-BF.A.1.a, AI.F-BF.A.2, AI.F-IF.A.3, AI.F-LE.A.2	1, 2, 4	Actuaries	1-2
A-7.8	Applying Recursively-Defined Sequences	Application	AI.A-CED.A.1, AI.A-CED.A.2, AI.A-CED.A.3, AI.F-BF.A.1.a, AI.F-BF.A.2, AI.F-IF.A.3, AI.F-LE.A.2	6, 7, 8	Sociologists	1-2
8. POLYNOMIALS AND FACTORING						12-16
A-8.1	Modeling with Polynomials	Application	AI.A-SSE.A.1.a, AI.A-SSE.A.1.b	1, 2, 4	Astronomers	1-2
A-8.2	Adding and Subtracting Polynomials	Exploration	AI.A-APR.A.1.a, AI.A-APR.A.1.b, AI.A-SSE.A.1.a, AI.A-SSE.A.1.b	1, 7, 8	Multiple	1
A-8.3	Multiplying Monomials and Binomials	Exploration	AI.A-APR.A.1.a, AI.A-APR.A.1.b, AI.A-SSE.A.1.a, AI.A-SSE.A.1.b	1, 2, 7	Multiple	1
A-8.4	Multiplying Polynomials	Exploration	AI.A-APR.A.1.a, AI.A-APR.A.1.b, AI.A-SSE.A.1.a, AI.A-SSE.A.1.b	1, 2, 7	Multiple	1
A-8.5	Special Products of Polynomials	Exploration	AI.A-APR.A.1.a, AI.A-APR.A.1.b, AI.A-SSE.A.1.a, AI.A-SSE.A.1.b, AI.A-SSE.A.2	1, 7, 8	Multiple	1
A-8.6	Operations with Polynomials	Application	AI.A-APR.A.1.a, AI.A-APR.A.1.b, AI.A-SSE.A.2	1, 2, 8	Operations Research Analysts	1-2
A-8.7	Factoring Using the Greatest Common Factor	Exploration	AI.A-APR.A.1.a, AI.A-APR.A.1.b, AI.A-SSE.A.2	1, 2, 7	Multiple	1
A-8.8	Factoring the Difference of Squares	Exploration	AI.A-APR.A.1.a, AI.A-APR.A.1.b, AI.A-SSE.A.2	1, 2, 7	Multiple	1
A-8.9	Factoring Using Grouping	Exploration	AI.A-APR.A.1.a, AI.A-APR.A.1.b, AI.A-SSE.A.2	2, 7, 8	Multiple	1
A-8.10	Factoring Quadratic Expressions in the Form $x^2 + bx + c$	Exploration	AI.A-REI.B.4.b, AI.A-SSE.A.2, AI.A-SSE.B.3.a, AI.F-IF.C.8.a	1, 2, 7	Multiple	1

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A-8.11	Factoring Quadratic Expressions in the Form $ax^2 + bx + c$	Exploration	AI.A-REI.B.4.b, AI.A-SSE.A.2, AI.A-SSE.B.3.a, AI.F-IF.C.8.a	1, 2, 7	Multiple	1-2
A-8.12	Solving Polynomial Equations	Exploration	AI.A-REI.A.1, AI.A-REI.B.4.b, AI.A-REI.D.12, AI.A-SSE.A.2, AI.A-SSE.B.3.a, AI.F-IF.C.8.a	1, 7, 8	Multiple	1-2
P A-8-P	Arithmetic with Polynomials and Rational Expressions	Project (Information Technology)	AI.A-APR.A.1.a, AI.A-APR.A.1.b, AI.A-SSE.A.1.a, AI.A-SSE.A.1.b, AI.A-SSE.A.2	1, 2, 4, 7, 8	Video Game Designers	3-6

9. QUADRATIC FUNCTIONS AND EQUATIONS
13-19

A-9.1	Graphing Quadratic Functions in Standard Form	Exploration	AI.A-CED.A.2, AI.A-REI.A.1, AI.F-IF.B.4, AI.F-IF.B.5, AI.F-IF.C.7.a	2, 4, 7	Multiple	1
A-9.2	Graphing Quadratic Functions in Vertex Form and Intercept Form	Exploration	AI.A-CED.A.2, AI.A-REI.A.1, AI.A-REI.B.4.a, AI.A-REI.B.4.b, AI.A-SSE.B.3.a, AI.A-SSE.B.3.b, AI.F-IF.B.4, AI.F-IF.B.5, AI.F-IF.C.7.a, AI.F-IF.C.8.a	1, 2, 4, 7	Multiple	1
A-9.3	Applying the Vertex Form of Quadratic Functions	Application	AI.A-CED.A.1, AI.A-CED.A.2, AI.A-CED.A.3, AI.A-REI.B.4.a, AI.A-REI.B.4.b, AI.A-SSE.B.3.b, AI.F-BF.A.1.a, AI.F-IF.C.7.a, AI.F-IF.C.8.a	1, 2, 4	Atmospheric and Space Scientists	1-2
A-9.4	Applying Graphs of Quadratic Functions	Application	AI.A-CED.A.1, AI.A-CED.A.2, AI.A-CED.A.3, AI.A-REI.B.4.a, AI.A-REI.B.4.b, AI.A-SSE.B.3.a, AI.A-SSE.B.3.b, AI.F-BF.A.1.a, AI.F-IF.C.7.a, AI.F-IF.C.8.a	4, 6, 7	Aerospace Engineers	1-2
A-9.5	Solving Quadratic Equations by Graphing and Taking the Square Root	Exploration	AI.A-CED.A.2, AI.A-REI.B.4.b, AI.A-REI.D.11, AI.A-REI.D.12, AI.F-IF.C.7.a	1, 2, 5, 7	Multiple	1

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	Title	Type	Standard(s)	Mathematical Practices	Career(s)	Number of Days
A-9.6	Solving Quadratic Equations by Factoring	Exploration	AI.A-REI.B.4.b, AI.A-REI.D.12, AI.A-SSE.B.3.a, AI.F-IF.C.8.a	1, 2, 4, 8	Multiple	1
A-9.7	Solving Quadratic Equations by Completing the Square	Exploration	AI.A-REI.B.4.b, AI.A-REI.D.12, AI.F-IF.C.8.a	1, 2, 7	Multiple	1
A-9.8	Solving Quadratic Equations by Quadratic Formula	Exploration	AI.A-REI.B.4.a, AI.A-REI.B.4.b, AI.A-REI.D.12	1, 2, 4, 5	Multiple	1
A-9.9	Using Quadratic Equations to Solve Problems	Application	AI.A-REI.B.4.a, AI.A-REI.B.4.b, AI.A-REI.D.12, AI.F-IF.C.8.a	1, 4, 6	Physicists	1-2
A-9.10	Comparing Quadratic Functions	Application	AI.A-CED.A.2, AI.F-BF.B.3, AI.F-IF.B.4, AI.F-IF.B.5, AI.F-IF.C.7.a	1, 2, 4	Industrial Production Managers	1-2
A-9.11	Solving Linear-Quadratic Systems Graphically	Exploration	AI.A-REI.C.7, AI.A-REI.D.11, AI.A-REI.D.12	1, 2, 4, 5	Multiple	1
A-9.12	Solving Linear-Quadratic Systems Algebraically	Exploration	AI.A-REI.C.7, AI.A-REI.D.11, AI.A-REI.D.12	2, 6, 7	Multiple	1-2
A-9.13	Applying Linear-Quadratic Systems	Application	AI.A-REI.C.7, AI.A-REI.D.11, AI.A-REI.D.12	1, 2, 4	Economists	1-2

10. GRAPHING AND MODELING WITH FUNCTIONS **11-15**

A-10.1	Graphing Absolute Value Functions	Exploration	AI.A-CED.A.1, AI.A-CED.A.2, AI.A-CED.A.3, AI.A-REI.D.10, AI.F-BF.A.1.a, AI.F-IF.B.4, AI.F-IF.C.7.b, AI.F-LE.A.1.b, AI.F-LE.A.2	1, 2, 7	Multiple	1
A-10.2	Graphing Step Functions	Exploration	AI.A-CED.A.2, AI.A-REI.D.10, AI.F-IF.B.4, AI.F-IF.C.7.b	1, 2, 7	Multiple	1

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	Title	Type	Standard(s)	Mathematical Practices	Career(s)	Number of Days
A-10.3	Applying Step Functions	Application	AI.A-CED.A.2, AI.A-REI.D.10, AI.F-IF.B.4, AI.F-IF.B.5, AI.F-IF.C.7.b	1, 2, 4	Cargo and Freight Agents	1-2
A-10.4	Graphing Piecewise-Defined Functions	Exploration	AI.A-CED.A.2, AI.A-REI.D.10, AI.F-IF.B.4, AI.F-IF.C.7.b	1, 2, 6, 7	Multiple	1
A-10.5	Applying Piecewise-Defined Functions	Application	AI.A-CED.A.2, AI.A-REI.D.10, AI.F-IF.B.4, AI.F-IF.B.5, AI.F-IF.C.7.b	1, 2, 4	Tax Preparers	1-2
A-10.6	Translations of Graphs of Functions	Exploration	AI.A-REI.A.1, AI.F-BF.A.1.a, AI.F-BF.A.1.b, AI.F-BF.A.2, AI.F-BF.B.3, AI.F-LE.A.1.b	1, 2, 7	Multiple	1
A-10.7	Stretches and Shrinks of Graphs of Functions	Exploration	AI.A-REI.A.1, AI.F-BF.B.3, AI.F-LE.A.1.b	1, 2, 7	Multiple	1
A-10.8	Reflections of Graphs of Functions	Exploration	AI.A-REI.A.1, AI.F-BF.B.3, AI.F-LE.A.1.b	1, 6, 7, 8	Multiple	1
A-10.9	Operations on Functions	Application	AI.A-REI.A.1, AI.F-BF.B.3, AI.F-LE.A.1.b	4, 7, 8	Film and Video Editors	1-2
A-10.10	Comparing Linear, Exponential, and Quadratic Models	Exploration	AI.F-IF.B.4, AI.F-IF.B.6, AI.F-IF.C.7.e, AI.F-IF.C.9, AI.F-LE.A.1.b, AI.F-LE.A.3, AI.F-LE.B.5	6, 7, 8	Multiple	1
A-10.11	Applying Comparisons of Linear, Exponential, and Quadratic Models	Application	AI.A-CED.A.2, AI.F-IF.B.4, AI.F-IF.B.6, AI.F-IF.C.7.a, AI.F-IF.C.7.e, AI.F-IF.C.9, AI.F-LE.A.2, AI.F-LE.A.3, AI.F-LE.B.5	1, 2, 4	Appraisers and Assessors of Real Estate	1-2
P A-10-P	Linear, Quadratic, and Exponential Models	Project (Information Technology)	AI.A-CED.A.2, AI.A-CED.A.3, AI.F-BF.A.1.a, AI.F-BF.A.1.b, AI.F-BF.A.2, AI.F-IF.C.7.a, AI.F-IF.C.7.e, AI.F-LE.A.2, AI.F-LE.A.3, AI.F-LE.B.5	4, 5, 8	Business Intelligence Analysts	3-6

11. RADICAL EXPRESSIONS AND INVERSE FUNCTIONS 12-17

A-11.1	Radical Expressions	Exploration	AI.N-RN.A.2, AI.N-RN.B.3	2, 6, 7	Multiple	1
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	Title	Type	Standard(s)	Mathematical Practices	Career(s)	Number of Days
A-11.2	Describing and Graphing Square Root Functions	Exploration	AI.A-CED.A.2, AI.A-REI.D.10, AI.F-BF.B.3, AI.F-IF.B.4, AI.F-IF.B.5, AI.F-IF.C.7.b	1, 6, 7	Multiple	1
A-11.3	Writing Square Root Functions	Application	AI.A-CED.A.2, AI.A-REI.D.10, AI.A-REI.D.12, AI.F-IF.B.4	1, 2, 4	Radiologic Technologists	1-2
A-11.4	Applying Square Root Functions	Application	AI.A-CED.A.1, AI.A-REI.D.12, AI.F-BF.A.1.a	1, 2, 4	Registered Nurses	1-2
A-11.5	Applying Graphs of Square Root Functions	Application	AI.F-BF.B.3, AI.F-IF.B.4, AI.F-IF.B.5, AI.F-IF.C.7.b	1, 2, 4	Mechanical Engineers	1-2
A-11.6	Describing and Graphing Cube Root Functions	Exploration	AI.A-CED.A.2, AI.A-REI.D.10, AI.F-BF.B.3, AI.F-IF.B.4, AI.F-IF.B.5, AI.F-IF.C.7.b	1, 2, 7	Multiple	1
A-11.7	Solving Radical Equations	Exploration	AI.A-REI.D.11, AI.A-REI.D.12, AI.F-IF.C.7.b	1, 2, 5, 7	Multiple	1
A-11.8	Inverses of Functions	Exploration	AI.F-BF.B.4.a	1, 2, 4	Multiple	1
A-11.9	Inverses of Linear Functions	Exploration	AI.F-BF.B.4.a	1, 2, 4	Multiple	1
A-11.10	Inverses of Radical Functions	Exploration	AI.F-BF.B.4.a	1, 2, 4	Multiple	1
A-11.11	Inverses of Quadratic Functions	Exploration	AI.A-CED.A.2, AI.F-BF.B.4.a, AI.F-IF.C.7.a	1, 2, 4	Multiple	1-2
A-11.12	Applying Inverse Functions	Application	AI.F-BF.B.4.a	1, 2, 6	Wind Turbine Service Technicians	1-2
P A-11-P	Interpreting Functions	Project (Information Technology)	AI.A-CED.A.2, AI.F-IF.B.4, AI.F-IF.B.6, AI.F-IF.C.7.a, AI.F-IF.C.7.e, AI.F-LE.A.2, AI.F-LE.A.3, AI.F-LE.B.5	2, 4, 7	Health Informatics Specialists	3-6
12. STATISTICS						11-16
A-12.1	Measures of Center	Exploration	AI.S-ID.A.3	1, 3, 5	Multiple	1
A-12.2	Measures of Spread	Exploration	AI.S-ID.A.3	1, 3, 5	Multiple	1

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	Title	Type	Standard(s)	Mathematical Practices	Career(s)	Number of Days	
A-12.3	Applying Measures of Center and Spread	Application	AI.S-ID.A.3	1, 2, 4	Statisticians	1-2	
A-12.4	Representing Data with Box Plots	Exploration	AI.S-ID.A.1	1, 2, 7	Multiple	1	
A-12.5	Distributions of Data	Exploration	AI.S-ID.A.1, AI.S-ID.A.2, AI.S-ID.A.3	2, 4, 7	Multiple	1	
A-12.6	Applying Box Plots	Application	AI.S-ID.A.1, AI.S-ID.A.3	2, 4, 5	Computer and Information Systems Managers	1-2	
A-12.7	Representing Data with Histograms	Exploration	AI.S-ID.A.1, AI.S-ID.A.2, AI.S-ID.A.3	3, 6, 7	Multiple	1	
A-12.8	Applying Histograms	Application	AI.S-ID.A.1, AI.S-ID.A.2, AI.S-ID.A.3	2, 4, 5	Financial Examiners	1-2	
A-12.9	Analyzing Data	Application	AI.S-ID.A.1, AI.S-ID.A.2	2, 3, 4	Market Research Analysts and Marketing Specialists	1-2	
A-12.10	Two-Way Frequency Tables	Exploration	AI.S-ID.B.5	1, 2, 7	Multiple	1	
A-12.11	Applying Two-Way Frequency Tables	Application	AI.S-ID.B.5	1, 3, 5	Social Science Research Assistants	1-2	
P	A-12-P	Interpreting Categorical and Quantitative Data	Project (Information Technology)	AI.S-ID.A.1, AI.S-ID.A.2, AI.S-ID.A.3	3, 4, 6, 8	Search Marketing Analysts	3-6

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