CURRICULUM MAP – ALGEBRA I

Chapter ONE

Mathematical skill	Conceptual Framework	Subset	Curriculum Level	Lesson
Recognize and name irrational numbers	Number Sense	Number Sets	D	1-3
Recognize and use the properties to simplify a numeric or algebraic expression	Number Sense	COMPUTATION without calculator	D	1-8
Recognize deductive reasoning	Patterns and Functions	Logic	I	1-8

Chapter TWO

Mathematical skill	Conceptual Framework	Subset	Curriculum Level	Lesson
Determine measures of variation (range, standard deviation, outliers of a data set)	Probability	Data Interpretation	D	2-7
Solve multiple step linear equations	Number Sense	Relationship	D/T	2-3
Solve for a variable in a formula with more than 1 step	Number Sense	Relationship	D/T	2-6

Chapter THREE

Mathematical skill	Conceptual Framework	Subset	Curriculum Level	Lesson
Graph an inequality	Number Sense	Relationship	D/T	3-1
Solve inequalities	Number Sense	Relationship	D/T	3-4

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Chapter FOUR

Mathematical skill	Conceptual Framework	Subset	Curriculum Level	Lesson
Develop simulations to predict an event (technology)	Probability	Chance	D	4-5
Collect a random sample from a population	Probability	Data Collection	D	4-6 extension
Use indirect measurement	Measurement	Types	D	4-2
Use dimensional analysis to find rates conversion factors	Number Sense	Relationship	D/T	4-1

Chapter FIVE

Mathematical skill	Conceptual Framework	Subset	Curriculum Level	Lesson
Identify and recognize linear and non linear relationships expressed in tables and graphs	Number Sense	Relationship	D/T	5-3
Graph the line representing the solution of a linear equation	Number Sense	Relationship	D/T	5-3
Name ordered paired values that are solutions to a linear equation and plot those values	Number Sense	Relationship	D/T	5-2
Identify direct variations	Patterns and Functions	Relationship	I/D	5-5
Identify domain and range	Patterns and Functions	Relationship	I/D	5-2
Recognize inductive reasoning (number patterns)	Patterns and Functions	Logic	I	5-6

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Chapter SIX

Mathematical skill	Conceptual Framework	Subset	Curriculum Level	Lesson
Determine the slope and intercepts of a line through a pair of given points	Patterns and Functions	Relationship	I/D	6-1 & 6-3
Recognize slope & y-intercept from a given linear equation	Patterns and Functions	Relationship	I/D	6-2

Chapter SEVEN

Mathematical skill	Conceptual Framework	Subset	Curriculum Level	Lesson
Apply and solve a system of linear equations by elimination, graphing, and substitution methods	Patterns and Functions	Relationship	I/D	7-1, 7-2 & 7-3
Solve problems by writing & graphing systems of inequalities	Patterns and Functions	Relationship	I/D	7-6

Chapter EIGHT

Mathematical skill	Conceptual Framework	Subset	Curriculum Level	Lesson
Recognize & describe exponential growth & decay	Patterns and Functions	Relationship	I/D	8-8
Write and evaluate powers 0 and negative	Number Sense	COMPUTATION without calculator	D	8-1
Use scientific notation	Number Sense	COMPUTATION without calculator	D	8-2

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Chapter NINE

Mathematical skill	Conceptual Framework	Subset	Curriculum Level	Lesson
Multiply to simplify polynomial expressions	Patterns and Functions	Relationship	D	9-2 & 9-3
Recognize factoring patterns of first and second degree polynomials	Number Sense	Relationship	D/T	9-2 & 9-6

Chapter TEN

Mathematical skill	Conceptual Framework	Subset	Curriculum Level	Lesson
Graph conics (circle, ellipse, parabola, hyperbola)	Patterns and Functions	Relationship	I	10-1
Determine the value of cube roots	Number Sense	COMPUTATION without calculator	I	10-9 extension
Solve quadratic or second degree equations by various methods	Patterns and Functions	Relationship	I/D	10-4, 10-5 & 10-7
Determine the shape, position, and line of symmetry of a quadratic function	Patterns and Functions	Relationship	I/D	10-1
Write and evaluate square roots	Number Sense	COMPUTATION without calculator	D	10-3
Approximate an irrational number (find/estimate square roots)	Number Sense	Estimation	D/T	10-3

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Chapter ELEVEN

Mathematical skill	Conceptual Framework	Subset	Curriculum Level	Lesson
Change irrational numbers to their simplest form	Number Sense	Relationship	I	11-1
Divide irrational numbers	Number Sense	COMPUTATION without calculator	I	11-1
Calculate the value of a trigonometric expression with and without a calculator	Number Sense	COMPUTATION without calculator	I	11-7
Compute the distance and midpoint of a segment with the appropriate formula	Geometry	Geometry	I	11-3
Use the Pythagorean theorem to find the length of any side in a right triangle	Geometry	Geometry	D	11-2
Use the basic trigonometric ratios of sine, cosine, and tangent to solve for sides and angles in a right triangle	Geometry	Geometry	D	11-7

Chapter TWELVE

Mathematical skill	Conceptual Framework	Subset	Curriculum Level	Lesson
Identify indirect variations	Patterns and Functions	Relationship	I/D	12-1
Use the counting principle to find the number of different arrangements of a group of terms	Probability	Chance	D	12-8
Recognize and calculate permutation and combination situations	Probability	Chance	D	12-8 & 12-9
Divide to simplify polynomial expressions	Patterns and Functions	Relationship	D	12-5

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Other CONCEPTS

Mathematical skill	Conceptual Framework	Subset	Curriculum Level	Lesson
Add/subtract vectors	Number Sense	COMPUTATION without calculator	I	
Use special right triangle relationships to find sides in a right triangle	Geometry	Geometry	D	
Develop simulations to predict an event	Probability	Chance	D	Skills Handbook p. 744
Recognize and use representative samples	Probability	Data Collection	D	
Differentiate and select methods of data collection according to efficiency	Probability	Data Collection	D	
Differentiate and select methods of data collection according to validity	Probability	Data Collection	D	
Determine credibility of data using a variety of strategies	Probability	Data Interpretation	D	
Determine measures of variation (range, standard deviation, outliers of a data set)	Probability	Data Interpretation	D	
Use matrices and grids to display and interpret data	Statistics	Data Organization	D/T	