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MARYLAND HIGH SCHOOL CORE LEARNING GOALS CORRELATED TO *MOVING WITH MATH® SUMS*

		Student Book	Skill Builders
	GOAL 1: FUNCTIONS AND ALGEBRA		
	The student will demonstrate the ability to investigate, interpret, and communicate solutions to mathematical and real-world problems using patterns, functions, and algebra.		
	EXPECTATION 1		
1.1	**The student will analyze a wide variety of patterns and functional relationships using the language of mathematics and appropriate technology.**		
1.1.1	The student will recognize, describe, and/or extend patterns and functional relationships that are expressed numerically, algebraically, and/or geometrically.	61, 198-200	98, 103
1.1.2	The student will represent patterns and/or functional relationships in a table, as a graph, and/or by mathematical expression.	198-200, 208, 209, 217, 218	181, 184
1.1.3	The student will apply addition, subtraction, multiplication, and/or division of algebraic expressions to mathematical and real -world problems.	152-156, 174, 175, 178, 180-183, 185-191	162, 163, 166, 169, 179, 185
1.1.4	The student will describe the graph of a non-linear function and discuss its appearance in terms of the basic concepts of maxima and minima, zeros (roots), rate of change, domain and range, and continuity.		
	EXPECTATION 2		
1.2	**The student will model and interpret real-world situations using the language of mathematics and appropriate technology.**		
1.2.1	The student will determine the equation for a line, solve linear equations, and/or describe the solutions using numbers, symbols, and/or graphs.	198-200, 206-209, 213, 214	181, 182
1.2.2	The student will solve linear inequalities and describe the solutions using numbers, symbols, and/or graphs.		
1.2.3	The student will solve and describe using numbers, symbols, and/or graphs if and where two straight lines intersect.	218, 219	184

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1.2.4	The student will describe how the graphical model of a non-linear function represents a given problem and will estimate the solution.	137, 201, 220	167, 170
1.2.5	The student will apply formulas and/or use matrices (arrays of numbers) to solve real-world problems.	63, 64	
	GOAL 2: GEOMETRY, MEASUREMENT, AND REASONING		
	The student will demonstrate the ability to solve mathematical and real-world problems using measurement and geometric models and will justify solutions and explain processes used.		
	EXPECTATION 1		
2.1	**The student will represent and analyze two- and three-dimensional figures using tools and technology when appropriate.**		
2.1.1	The student will analyze the properties of geometric figures	87-90	134-137
2.1.2	The student will identify and/or verify properties of geometric figures using the coordinate plane and concepts from algebra.	108	
2.1.3	The student will use transformations to move figures, create designs, and/or demonstrate geometric properties.	92, 95	149
2.1.4	The student will construct and/or draw and/or validate properties of geometric figures using appropriate tools and technology.		147, 148
	EXPECTATION 2		
2.2	**The student will apply geometric properties and relationships to solve problems using tools and technology when appropriate.**		
2.2.1	The student will identify and/or verify congruent and similar figures and/or apply equality or proportionality of their corresponding parts.	81, 93	114, 115, 150
2.2.2	The student will solve problems using two-dimensional figures and/or right-triangle trigonometry.	96, 97	146
2.2.3	The student will use inductive or deductive reasoning.	106	
	EXPECTATION 3		
2.3	**The student will apply concepts of measurement using tools and technology when appropriate.**		
2.3.1	The student will use algebraic and/or geometric properties to measure indirectly.	81	114, 115

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2.3.2	The student will use techniques of measurement and will estimate, calculate, and/or compare perimeter, circumference, area, volume, and/or surface area of two- and three-dimensional figures and their parts.	98-118	117-132, 138-140
	GOAL 3: DATA ANALYSIS AND PROBABILITY		
	The student will demonstrate the ability to apply probability and statistical methods for representing and interpreting data and communicating results, using technology when needed.		
	EXPECTATION 1		
3.1	**The student will collect, organize, analyze, and present data.**		
3.1.1	The student will design and/or conduct an investigation that uses statistical methods to analyze data and communicate results.	132	153, 154
3.1.2	The student will use the measures of central tendency and/or variability to make informed conclusions.	132, 141	154, 159
3.1.3	The student will calculate theoretical probability or use simulations or statistical inferences from data to estimate the probability of an event.	120-125	155, 157
	EXPECTATION 2		
3.2	**The student will apply the basic concepts of statistics and probability to predict possible outcomes of real-world situations.**		
3.2.1	The student will make informed decisions and predictions based upon the results of simulations and data from research.	125	155
3.2.2	The student will interpret data and/or make predictions by finding and using a line of best fit and by using a given curve of best fit.	142, 143	150
3.2.3	The student will communicate the use and misuse of statistics.		