

ALGEBRA I - PRECISION GLEs

NUMBER AND NUMBER RELATIONS		
GLE.1	Identify and describe differences among natural numbers, whole numbers, integers, rational numbers, and irrational numbers	
GLE.2	Evaluate and write numerical expressions involving integer exponents	
	2a	evaluate
	2b	write
GLE.3	Apply scientific notation to perform computations, solve problems, and write representations of numbers	
	3a	write
	3b	compute and solve problems
GLE.4	Distinguish between an exact and an approximate answer, and recognize errors introduced by the use of approximate numbers with technology	
	4a	distinguish
	4b	recognize errors
GLE.5	Demonstrate computational fluency with all relational numbers (e.g., estimation, mental math, technology, paper/pencil)	
	5a	estimation
	5b	mental math
	5c	technology
	5d	paper/pencil
GLE.6	Simplify and perform basic operations on numerical expressions involving radicals (e.g., $\sqrt{3} + 5\sqrt{3} = 6\sqrt{3}$)	
	6a	simplify
	6b	perform basic operations
GLE.7	Use proportional reasoning to model and solve real-life problems involving direct and inverse variation	
	7a	direct
	7b	inverse

ALGEBRA	
GLE.8	Use order of operations to simplify or rewrite variable expressions
GLE.9	Model real-life situations using linear expressions, equations, and inequalities
	9a expressions
	9b equations
	9c inequalities
GLE.10	Identify independent and dependent variables in real-life relationships
GLE.11	Use equivalent forms of equations and inequalities to solve real-life problems (<i>standard, slope-intercept, point-slope, point-point</i>)
	11a equations
	11b inequalities
GLE.12	Evaluate polynomial expressions for given values of the variable
GLE.13	Translate between the characteristics defining a line (i.e., slope, intercepts, points) and both its equation and graph
	13a equation
	13b graph
GLE.14	Graph and interpret linear inequalities in one or two variables and systems of linear inequalities
	14a Graph linear inequalities
	14b Interpret linear inequalities
	14c Graph systems of linear inequalities
	14d Interpret systems of linear inequalities
GLE.15	Translate among tabular, graphical, and algebraic representations of functions and real-life situations.
GLE.16	Interpret and solve systems of linear equations using graphing, substitution, elimination, with and without technology, and matrices using technology
	16a graphing
	16b substitution
	16c elimination
	16d matrix operations
MEASUREMENT	
GLE.17	Distinguish between precision and accuracy (<i>including time, degrees, and customary and metric units of length, area, volume, and mass</i>)
GLE.18	Demonstrate and explain how the scale of a measuring instrument determines the precision of that instrument
GLE.19	Use significant digits in computational problems
GLE.20	Demonstrate and explain how relative measurement error is compounded when determining absolute error
GLE.21	Determine appropriate units and scales to use when solving measurement problems
GLE.22	Solve problems using indirect measurement

GEOMETRY		
GLE.23	Use coordinate methods to solve and interpret problems (e.g., slope as rate of change, intercept as initial value, intersection as common solution, midpoint as equidistant)	
	23a	slope and intercepts
	23b	intersection and midpoint
GLE.24	Graph a line when the slope and a point or when two points are known	
GLE.25	Explain slope as a representation of "rate of change"	
GLE.26	Perform translations and line reflections on the coordinate plane	
	26a	translations
	26b	line reflections
DATA ANALYSIS, PROBABILITY, AND DISCRETE MATH		
GLE.27	Determine the most appropriate measure of central tendency for a set of data based on its distribution (<i>i.e., from a graph of the data</i>)	
GLE.28	Identify trends in data and support conclusions by using distribution characteristics such as patterns, clusters, and outliers.	
GLE.29	Create a scatter plot from a set of data and determine if the relationship is linear or non-linear	
GLE.30	Use simulations to estimate probabilities	
GLE.31	Define probability in terms of sample spaces, outcomes, and events	
	31a	sample spaces
	31b	outcomes
	31c	events
GLE.32	Compute probabilities using geometric models and basic counting techniques such as combinations and permutations	
	32a	geometric models (<i>area</i>)
	32b	combinations and permutations
GLE.33	Explain the relationship between the probability of an event occurring and the odds of an event occurring, and compute one given the other.	
GLE.34	Follow and interpret processes expressed in flow charts	
PATTERNS, RELATIONS, FUNCTIONS		
GLE.35	Determine if a relation is a function and use appropriate function notation	
GLE.36	Identify the domain and range of functions (<i>from an algebraic expression, graph, set of ordered pairs, or table of data</i>)	
GLE.37	Analyze real-life relationships that can be modeled by linear functions	
GLE.38	Identify and describe the characteristic of families of linear functions, with and without technology	
GLE.39	Compare and contrast linear functions algebraically in terms of their rates of change (<i>slope</i>) and intercepts (<i>x- and y-</i>)	
GLE.40	Explain how the graph of a linear function changes as the coefficients or constants are changed in the function's symbolic representation	