

**Number and Operations**

**15 – 16**

N 1.1A	Represent a number using scientific notation in applied situations
N 1.1B	Find square roots
N 1.1C	Find the value of numbers using exponents (e.g., $2^9$ , $10^6$ )
N 1.1D	Represent a percent as a decimal or fraction and vice versa
N 1.1E	Use number sense
N 1.1F	Compare and order fractions, decimals and percents
N 1.2A	Apply the commutative, associative, distributive, equality, and identity properties, including order of operations, to simplify mathematical expressions, equations, and inequalities
N 1.2B	Justify the steps in solving equations and inequalities
N 2.1A	Add, subtract, multiply, and divide rational numbers (e.g., fractions, decimals, percents, integers) in real-world situations
N 2.1B	Use computational skills to solve applied problems with ratios and proportions
N 2.1C	Perform operations of addition, subtraction, and scalar multiplication to solve problems using matrices in applied situations
N 2.2A	Use rounding skills to estimate computations
N 2.2B	Determine mathematically reasonable solutions using supporting data

**Algebra**

**19 – 20**

A 1.1A	Find the next term of a pattern or sequence
A 1.1B	Generalize a pattern
A 1.1C	Describe, extend, analyze, and create a wide variety of patterns to investigate relationships and solve problems
A 1.1D	Interpret situations in terms of given graphs
	Identify situations that can and cannot be represented by a line
A 1.1E/F	Understand the effects of changing the slope and $y$ -intercept on graphs, linear equations, and in applied situations
A 1.2A	Use the laws of exponents
A 2.1A	Evaluate expressions
A 2.1B	Find specific functions values
A 2.1C	Simplify polynomial expressions
A 2.1D	Perform polynomial arithmetic
A 2.1E	Use symbols to represent unknowns
A 2.1F	Translate an expression, equation, or inequality from words and vice versa
A 2.1G	Represent and translate linear functions as equations and inequalities from tables, and graphs, and vice versa
A 2.1H	Identify a linear equation given characteristics of the line
A 2.2A	Solve linear equations
A 2.2B	Solve linear inequalities
A 2.2C	Solve systems of linear equations
A 2.2D	Solve simple quadratic equations

**Measurement & Geometry**

**19 – 20**

- MG 1.1A Find the perimeter and area of 2-dimensional figures
- MG 1.1B Use formulas to find volume and surface areas of 3-dimensional objects (e.g., prisms, pyramids, cylinders)
- MG 1.1C Approximate and find volumes and areas for irregular figures
- MG 1.1D Use dimensional analysis to convert units and check measurement computations
- MG 1.1E Convert and use appropriate units of measure (customary and metric)
- MG 2.1A Identify and apply properties of circles, polygons, and angles
- MG 2.1B Analyze the properties of spheres, cylinders, prisms and pyramids
- MG 2.1C Identify attributes of congruent figures
- MG 2.1D Identify attributes of similar figures
- MG 2.1E Use proportions to solve problems involving similar figures, including scale drawings
- MG 2.1F Identify the congruent and supplementary relationships of the angles formed by parallel lines and a transversal
- MG 2.1G Determine the resulting change in area and volume of a figure when one or more dimensions are changed
- MG 2.1H Solve applied problems using the Pythagorean Theorem
- MG 2.2A Given two points, find the slope between them
- MG 2.2B Identify missing coordinates needed to form a specific polygon
- MG 2.2C Translate, reflect, rotate, and dilate figures on the coordinate plane

**Data Analysis & Probability**

**8**

- DP 1.1A Represent and interpret data using circle graphs, bar graphs, scatterplots, histograms, stem-and-leaf plots, box-and-whisker plots, and matrices
- DP 1.1B Determine positive, negative, or no correlation between data
- DP 1.1C Find the equation of the line that best fits a set of data (line of best fit)
- DP 1.1D Determine the line of best fit
- DP 1.1E Identify the graph of the function that best models a data set
- DP 1.1F Find the mean, median, mode and range for a set of data
- DP 1.2A Find the number of possible outcomes of an event
- DP 1.2B Represent possible outcomes in the form of an organized list, chart, or tree diagram
- DP 1.2C Calculate the probability of a simple event
- DP 1.2E Calculate the probability of a complementary event

**Integrated Response Questions**

**9**

The test will include three integrated response questions (IRs). IRs are 3-point constructed-response items that integrate content standards and process standards. IRs require students to use the process skills of problem solving, communication, representations, and connections to apply a solution strategy, and communicate and represent the result.