Algebra I
High School

1.0 Students will apply concepts of number and operations.
1.1 Demonstrate number sense and evaluate reasonableness of the results from computation.
1.2 Compare and contrast the properties of numbers and number systems.
1.3 Analyze the effects of mathematical operations on numbers.
1.4 Perform operations within different mathematical systems.

2.0 Students will apply concepts of algebra.
2.1 Understand relations and functions and use various representations for them.
2.2 Analyze functions symbolically, numerically and graphically.
2.3 Write equivalent forms of expressions, equations, inequalities and systems of equations and solve them.
2.4 Use symbolic algebra to analyze mathematical relationships.

3.0 Students will apply concepts of geometry.
3.1 Compare and contrast relationships among classes of two- and three-dimensional geometric objects, make and test conjunctures about them, and solve problems involving them.
3.2 Use trigonometric relationships to determine lengths and angle measures.
3.3 Use coordinate systems to analyze geometric situations.
3.4 Understand and represent transformations of objects in the plane.

4.0 Students will apply concepts of measurement.
4.1 Make decisions about units and scales that are appropriate for problem situations involving measurement.
4.2 Analyze precision, accuracy and approximate error in measurement situations.
4.3 Understand and use formulas for the area, surface area and volume of geometric figures, including cones, spheres and cylinders.

5.0 Students will apply concepts of data analysis and probability.
5.1 Understand the meaning of measurement data and categorical data of univariate and bivariate data and use the term variable.

5.2 Represent, analyze, interpret and use various representations of data.

5.3 Analyze univariate and bivariate data.

5.4 Construct and understand probability, distributions and sample spaces.