Estimation and Computation

M3.4.1 Use estimation to solve problems and to check the accuracy of solutions; state whether the estimation is greater or less than the exact answer.

M3.3.2 Apply basic operations efficiently and accurately, using estimation to check the reasonableness of results.

M3.4.2 Add and subtract real numbers using powers.

M3.4.3 Multiply and divide real numbers in various forms including powers.

M3.3.5 Convert between equivalent fractions, decimals, percents, and proportions. Convert from exact to decimal representations of irrational numbers.

M3.4.5 Use ratios and proportions to model and solve fraction and percent problems with variables.

Functions and Relationships

M4.3.1 Identify numeric and geometric patterns to find the next term and predict the nth term.

M4.4.2 Create and solve linear equations and inequalities.

M4.4.3 Create and solve simple systems of equations.

M4.3.4 Translate among and use tables of ordered pairs, graphs on coordinate planes, and linear equations as tools to represent and analyze patterns.

M4.3.5 Find the value of a variable by evaluating formulas and algebraic expressions for given values.

Geometry

M5.3.1 Identify, classify, compare, and sketch regular and irregular polygons.

M5.2.2 Compare and contrast plane and solid figures (e.g., circle/sphere, square/cube, triangle/pyramid) using relevant attributes, including the number of vertices, edges, and the number and shape of faces.

M5.3.3 Apply the properties of equality and proportionality to solve problems involving congruent or similar shapes.

M5.3.4 Estimate and determine volume and surface areas of solid figures using manipulatives and formulas; estimate and find circumferences and areas of circles.

M5.2.6 Locate and describe objects in terms of their position with and without compass directions; identify coordinates for a given point or locate points of given coordinates on a grid.

M5.2.7 Sketch and identify line segments, midpoints, intersections, parallel, and perpendicular lines.

Statistics/Probability

M6.3.1 Collect, analyze, and display data in a variety of visual displays including frequency distributions, circle graphs, histograms, and scatter plots.

M6.3.2 Interpret and analyze information found in newspapers, magazines, and graphical displays.

M6.3.3 Determine and justify a choice of mean, median, or mode as the best representation of data for a practical situation.

M6.3.4 Make projections based on available data and evaluate whether or not inferences can be made given the parameters of the data.

M6.1.4 Find and record the possibilities of simple probability experiments; explain differences between chance and certainty, giving examples.

M6.2.5 Conduct simple probability experiments using concrete materials and represent the results using fractions and probability.

* Process Skills
(Problem Solving, Communication, Reasoning, Connections)

M8.3.3 Use appropriate vocabulary, symbols, and technology to explain, justify, and defend mathematical solutions.

M7.2.2 Select and apply a variety of strategies including making a table, chart or list, drawing pictures, making a model, and comparing with previous experience to solve problems.

M10.3.1 Apply mathematical skills and processes to science and humanities.

M10.3.2 Apply mathematical skills and processes to situations with peers and community

* Process skills are assessed but not separately reported on individual student reports.