THE REAL NUMBER SYSTEM - Extend the properties of exponents to rational exponents

N-RN.1. Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.

EEN-RN.1. Determine the value of a quantity that is squared or cubed

4	I can determine the value of quantify that is squared or cubed
3	I can identify the square root of a perfect squares and cube root of perfect cubes
2	I can create a perfect square/cube using a model
1	I can identify a perfect square/cube

QUANTITIES - Reasoning quantitatively and use units to solve problems

N-Q.1. Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.
N-Q.2. Define appropriate quantities for the purpose of descriptive modeling.
N-Q.3. Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

EEN-Q.1-3. Express quantities to the appropriate precision of measurement.

4	Express solutions to problems using the appropriate precision of measurements.
3	Express quantities to the appropriate precision of measurement.
2	Select the appropriate type of unit as a measurement tool.
1	Identify measurement tools. Identify the attribute to be measured (weight, length, and temperature).

THE COMPLEX NUMBER SYSTEM - Perform arithmetic operations with complex numbers

N-CN.2. Use the relation i2 = –1 and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.
EEN-CN.2.a Use the commutative, associative, and distributive properties to add, subtract, and multiply whole numbers

4	Apply the operations of addition, subtraction, and multiplication in real world situations
3	Use the operations of addition, subtraction, and multiplication with decimals (decimal value x whole number) in real-world situations using money as the standard units ($20, $10, $5, $1, $0.25, $0.10, $0.05, and $0.01).
2	Use the operations of addition (1-100), subtraction (1-100) and multiplication(0-10) with whole numbers.
1	Use the operations of addition (1-50), subtraction (1-20) and multiplication (0 – 5) with whole numbers.

ALGEBRA SEEING STRUCTURE IN EQUATIONS - Interpret the structure of equations

A-SSE.1. Interpret expressions that represent a quantity in terms of its context.
EEA-SSE.1. Match an algebraic expression involving one operation to represent a given word expression with an illustration.

4	Write or match an algebraic expression for a given word expression involving more than one operation.
3	Match an algebraic expression involving one operation to represent a given word expression with an illustration.
2	Identify the operation used for word expressions as indicated by an illustration.
1	Recognize the symbol for an operation.

ALGEBRA SEEING STRUCTURE IN EQUATIONS - Write equations in equivalent forms to solve problems

A-SSE.3. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.
EEA-SSE.3. Solve simple algebraic equations with one variable using multiplication and division

4	Solve one-step equations (multiplication and division of two digits) with a variable.
3	Solve simple one-step equations (multiplication and division) with a variable.
2	Solve basic equations.
1	Identify quantity and match to the number.

ALGEBRA SEEING STRUCTURE IN EQUATIONS - Write equations in equivalent forms to solve problems

A-SSE.4. Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems.
EEA-SSE.4 Determine the successive term in a geometric sequence given the common ratio

4	Find the missing components when given various ratios that form proportions.
3	Identify the missing part in any other equivalent ratio when given any ratio.
2	Identify the missing part in the next ratio using concrete objects when given a ratio (1:_).
1	Identify or demonstrate a ratio relationship (See the recommendation for 6.RP.1 Level II).

CREATING EQUATIONS - Creating equations that describe numbers and relationships

A-CED.1. Create equations and inequalities in one variable and use them to solve problems.
EEA-CED.1. Create an equation involving one operation with one variable, and use it to solve a real-world problem

4	Solve an algebraic expression with more than one variable.
3	Solve an algebraic expression using subtraction.
2	Solve simple equations with unknown/missing values (without variables).
1	Identify what is unknown.

A-CED.2. Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
A-CED.3. Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context.
A-CED.4. Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.

EEA-CED.2-4. Solve one-step inequalities.

4	Solve two-step inequalities with a variable
3	Solve one-step inequalities.
2	Verify the solution to an inequality with one variable.
1	Identify quantities that are greater than or less than a given quantity.

REASONING WITH EQUATIONS AND INEQUALITIES - Understand equations as a process of reasoning

A-REI.10. Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).

EEA-REI.10.-12. Interpret the meaning of a point on the graph of a line. For example, on a graph of pizza purchases, trace the graph to a point and tell the number of pizzas purchased and the total cost of the pizzas.

4	Make a prediction using the graph of an equation with two variables that form a line when plotted using the trend of the line.
3	Determine the two pieces of information that are plotted on a graph of an equation with two variables that form a line when plotted.
2	Use a graph of two variables to find the answer to a real-world problem.
1	Identify major parts of a graph.

F-IF.1-3 Understand the concept of a function and use function notation
EEF-IF.1-3 Use the concept of function to solve problems.

4	Use the concept of functions to identify how the two variables are affected.
3	Use the concept of function to solve problems.
2	Solve problems using a table that shows basic relationships.
1	Identify basic information located on graphs.

FUNCTIONS – INTERPRETING FUNCTIONS - Understand the concept of function and use function notation

F-IF.4. For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship.
F-IF.5. Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.
F-IF.6. Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph

EEF-IF.4-6. Construct graphs that represent linear functions with different rates of change and interpret which is faster/slower, higher, lower, etc…

4	Evaluate key features of a graph (e.g. increasing, decreasing, constant.).
3	Interpret rate of change (e.g. higher/lower, faster/slower).
2	Graph a simple linear equation represented by a table of values.
1	Read a table.

FUNCTIONS BUILDING FUNCTIONS - Build a function that models a relationship between two quantities

F-BF.1. Build a function that models a relationship between two quantities.
EEF-BF.1. Select the appropriate graphical representation (first quadrant) given a situation involving constant rate of change.

4	Complete the appropriate graphical representation (first quadrant) given a situation involving constant rate of change.
3	Select the appropriate graphical representation (first quadrant) given a situation involving constant rate of change.
2	Select the appropriate graphical representation (first quadrant) given a situation involving constant rate of change where the difference is very clear.
1	Identify the terms in a sequence.
FBF.2. Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.

EEF-BF.2. EEF-BF.2. Determine an arithmetic sequence with whole numbers when provided a recursive rule.

4	Build an arithmetic sequence when provided a recursive rule with decreasing terms.
3	Build an arithmetic sequence when provided a recursive rule with whole numbers.
2	Identify a term in a sequence.
1	Recognize and match a sequence.

FUNCTIONS LINEAR QUADRADIC & EXPONENTIAL MODELS - Construct and compare linear, quadratic, and exponential models and solve problems

F-LE.1. Construct and compare linear, quadratic, and exponential models and solve problems.
EEF-LE.1. Model a simple linear function such as y=mx to show functions grow by equal factors over equal intervals.

4	Plot points using pictures in first quadrant on a graph using whole numbers and explain how y increases/decreases as x changes.
3	Model a simple linear function such as y = mx to show functions grow by equal factors over equal intervals.
2	Identify a specific data point in the first quadrant and explain the meaning behind it.
1	Interpret major ideas of a graph with linear functions.

GEOMETRY CONGRUENCE - Experiment with transformations in the plane

G.CO.1 Experiment with transformation in the plane.
EEG-CO.1. Know the attributes of perpendicular lines, parallel lines, and line segments, angles, and circles.

4	Compare attributes of perpendicular lines, parallel lines, parallel lines, line segments, angles, and circles
3	Know the attributes of perpendicular lines, parallel lines, and lines segments, angles, and circles.
2	Know the attributes of lines, circles, and angles with equitant measure.
1	Identify a line and a shape (i.e. circle, square, triangle).

GEOMETRY CONGRUENCE - Experiment with transformations in the plane

CO. 4. Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallels lines, and line segments.
CO.5. Given a geometric figures and a rotations, reflection, or translation, draw the transformed figures.

EEG-CO.4-5: Given a geometric figure and a rotation, reflection, or translation of that figure, identify the components of the two figures that are congruent

4	Demonstrate what happens when a figure is transformed.
3	Identify rotations, reflections, and slides.
2	Recognize rotations, reflections, or slide.
1	Attend to movement demonstrating rotations, reflections, and slides.

GEOMETRY CONGRUENCE - Understand congruence in terms of rigid motions

G.CO.6-8 Understand Congruence In Terms of rigid motions
EEG-CO 6-8: Identify corresponding congruent (the same) parts of shapes.

4	Demonstrate why shapes are congruent.
3	Identify corresponding congruent (the same) parts of shapes.
2	Recognize congruent parts.
1	Recognize shapes that are congruent.

G-GPE.7. Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.
EEG-GPE.7. Find perimeter and area of squares and rectangles to solve real world problems.

4	Use formulas to find perimeter and area of squares and rectangles to solve real-world problems.
3	Find perimeter and area of squares and rectangles to solve real-world problems.
2	Find perimeter or area by counting on a grid.
1	Identify inside, around, and outside of a closed figure.

GEOMETRIC MEASUREMENT DIMENSIONS - Explain volume formulas and use them to solve problems.

EEG-GMD.1.3. Make a prediction about the volume of a container, the area of a figure, and the perimeter of a figure, and then test the prediction using formulas or models

4	Apply knowledge of volume, area, and perimeter to make appropriate estimates.
3	Make a prediction based on knowledge of volume, perimeter and area to identify the volume in a container, area and/or perimeter of figure.
2	Determine whether volume or area is being measured.
1	Experience volume.

GEOMETRIC MEASUREMENT DIMENSIONS - Visualize relationships between two-dimensional and three-dimensional objects.

EEG-GMD.4. Identify the shapes of two-dimensional cross-sections of three-dimensional objects

4	Use the properties of two-dimensional and three-dimensional objects to solve real-world problems.
3	Distinguish between two-dimensional and three-dimensional objects to solve real-world problems.
2	Distinguish between two-dimensional and three-dimensional Ex. Classify two-dimensional and three-dimensional objects by their use (e.g., Which of these can you use as a container, a box, or a square?).
1	Identify two-dimensional shapes.

GEOMETRIC MEASUREMENT DIMENSIONS - Apply geometric concepts in modeling situations.

EEG-MG.1-3. Use properties of geometric shapes to describe real-life objects.

4	Apply geometric methods to solve design problems.
3	Use properties of geometric shapes to describe real-life objects.
2	Identify geometric shapes.
1	Compare the capacity of three-dimensional objects.

STATISTICS AND PROBABILITY INTERPRETING DATA - Summarize, represent and interpret data on a single count or measurement variable

S-ID.1. Represent data with plots on the real number line (dot plots, histograms, and box plots).
S-ID.2. Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.

EES-ID.1-2. Given data, construct a simple graph (table, line, pie, bar, or picture) and answer questions about the data

4	Collect and organize data in simple graphs and use findings to draw conclusions from the data.
3	Given data, construct a simple graph (table, line, pie, bar or picture) and answer questions about the data.
2	Given a graph, answer simple questions based on data
1	Identify any part of a simple graph

S-ID.3. Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).

EES-ID.3. Interpret general trends on a graph or chart*

4	Extend a graph or chart to make a prediction.
3	Indicate general trends on a graph or chart.
2	Demonstrate increase and decrease over time.
1	Determine categories needed on a graph.

S-ID.4. Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.

EES-ID.4. Calculate the mean of a given data set (limit data points to less than five).

4	Extend a graph or chart to make a prediction.
3	Indicate general trends on a graph or chart.
2	Demonstrate increase and decrease over time.
1	Determine categories needed on a graph.

STATISTICS AND PROBABILTY MAKING INFERENCES AND JUSTIFYING CONCLUSIONS - Understand and evaluate random processes underlying statistical experiments

S-IC.1. Understand statistics as a process for making inferences about population parameters based on a random sample from that population.
S-IC.2. Decide if a specified model is consistent with results from a given data- generating process, e.g., using simulation.

EES-IC.1-2. Determine the likelihood of an event occurring when the out comes are equally likely to occur.

4	Determine the likelihood of an event occurring when the outcomes are not equally likely to occur.
3	Determine the likelihood of an event occurring when the outcomes are not equally likely to occur.
2	Determine the possible outcomes of an event occurring.
1	Identify one event or outcome of an event occurring.

STATISTICS AND PROBABILITY CONDITIONAL PROBABILITY AND RULES OF PROBABILITY - Understand and evaluate random processes underlying statistical experiments

S-CP.1. Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events ("or," "and," "not").

EES-CP.1-4. Identify when events are independent or dependent.

4	Identify when events are independent or dependent.
3	Identify when events are independent or dependent.
2	Identify the outcomes of an event.
1	Determine which event occurs first in a sequence.