Clint Independent School District
Instructional Services

Benchmark Blueprint

Subject: Math Grade: 9th Grade Testing Window: Jan 31 – Feb 4

Student Expectation
A.1A The student is expected to describe independent and dependent quantities in functional relationships
A.1B The student is expected to [gather and record data and] use data sets to determine functional relationships between quantities
A.1C The student is expected to describe functional relationships for given problem situations and write equations or inequalities to answer questions arising from the situations
A.1D The student is expected to represent relationships among quantities using [concrete] models, tables, graphs, diagrams, verbal descriptions, equations, and inequalities
A.1E The student is expected to interpret and make decisions, predictions, and critical judgments from functional relationships
A.2A The student is expected to identify [and sketch] the general forms of linear ($y = x$) and quadratic ($y = x$ 2) parent functions
A.2C The student is expected to interpret situations in terms of given graphs [or create situations that fit given graphs]
A.3A The student is expected to use symbols to represent unknowns and variables
A.4A The student is expected to find specific function values, simplify polynomial expressions, transform and solve equations, and factor as necessary in problem situations
A.4B The student is expected to use the commutative, associative, and distributive properties to simplify algebraic expressions
A.5C The student is expected to use, translate, and make connections among algebraic, tabular, graphical, or verbal descriptions of linear functions
A.6C The student is expected to investigate, describe, and predict the effects of changes in m and b on the graph of $y = mx + b$
A.6E The student is expected to determine the intercepts of the graphs of linear functions and zeros of linear functions from graphs, tables, and algebraic representations
A.6F The student is expected to interpret and predict the effects of changing slope and y-intercept in applied situations

A.6G The student is expected to relate direct variation to linear functions and solve problems involving proportional change
A.7A The student is expected to analyze situations involving linear functions and formulate linear equations or inequalities to solve problems
A.7B The student is expected to investigate methods for solving linear equations and inequalities using [concrete] models, graphs, and the properties of equality, select a method, and solve the equations and inequalities
A.7C The student is expected to interpret and determine the reasonableness of solutions to linear equations and inequalities
A.8A The student is expected to analyze situations and formulate systems of linear equations in two unknowns to solve problems.
A.9C The student is expected to investigate, describe, and predict the effects of changes in *c* on the graph of $y = ax\ 2 + c$.
A.11A The student is expected to use [patterns to generate] the laws of exponents and apply them in problem-solving situations
8.6A The student is expected to generate similar figures using dilations including enlargements and reductions
8.6B The student is expected to graph dilations, reflections, and translations on a coordinate plane
8.7D The student is expected to locate and name points on a coordinate plane using ordered pairs of rational numbers
8.7A The student is expected to draw three-dimensional figures from different perspectives
8.7B The student is expected to use geometric concepts and properties to solve problems in fields such as art and architecture
8.7C The student is expected to use pictures or models to demonstrate the Pythagorean Theorem
8.8B The student is expected to connect models of prisms, cylinders, pyramids, spheres, and cones to formulas for volume of these objects
8.8C The student is expected to estimate measurements and use formulas to solve application problems involving lateral and total surface area and volume
8.9A The student is expected to use the Pythagorean Theorem to solve real-life problems
8.9B The student is expected to use proportional relationships in similar two-dimensional figures or similar three dimensional figures to find missing measurements
8.10A The student is expected to describe the resulting effects on perimeter and area when dimensions of a shape are changed proportionally
8.3B The student is expected to estimate and find solutions to application problems involving percents and other proportional relationships such as similarity and rates

8.11B The student is expected to use theoretical probabilities and experimental results to make predictions and decisions
8.12A The student is expected to select the appropriate measure of central tendency or range to describe a set of data and justify the choice for a particular situation
8.12C The student is expected to select and use an appropriate representation for presenting and displaying relationships among collected data, including line plots, line graphs, [stem and leaf plots,] circle graphs, bar graphs, box and whisker plots, histograms, and Venn diagrams, with and without the use of technology.
8.13B The student is expected to recognize misuses of graphical or numerical information and evaluate predictions and conclusions based on data analysis
8.14A The student is expected to identify and apply mathematics to everyday experiences, to activities in and outside of school, with other disciplines, and with other mathematical topics
8.14B The student is expected to use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness
8.14C The student is expected to select or develop an appropriate problem-solving strategy from a variety of different types, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.
8.15A The student is expected to communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models
8.16B The student is expected to validate his/her conclusions using mathematical properties and relationships
Total number of items on benchmark: 52