Kentucky Alternate Assessment

Grade 10th - Math (2023)

Number and Quantity

5 Define appropriate units in context for the purpose of descriptive modeling. KY.HS.N.5

Alternate Assessment Target: No limitations. All parts of the Kentucky Academic Standard are eligible to be included as an assessment item.

Algebra

1 Interpret expressions that represent a quantity in terms of its context. KY.HS.A.1

a Interpret parts of an expression, such as terms, factors and coefficients. KY.HS.A.1.A

b Interpret complicated expressions, given a context, by viewing one or more of their parts as a single entity. KY.HS.A.1.B

Alternate Assessment Target: No limitations. All parts of the Kentucky Academic Standard are eligible to be included as an assessment item.

12 Create equations and inequalities in one variable and use them to solve problems. KY.HS.A.12

Alternate Assessment Target: Limit to numbers within negative 20 to 20. Limit to linear equations and exponential functions.

16 Understand each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method. KY.HS.A.16

Alternate Assessment Target: Limit coefficients to integers from negative 20 to 20.

Functions

1 **Understand properties and key features of functions and the different ways functions can be represented.** KY.HS.F.1

- a Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then f(x) denotes the output of f corresponding to the input x. KY.HS.F.1.A
- b Using appropriate function notation, evaluate functions for inputs in their domains and interpret statements that use function notation in terms of a context. KY.HS.F.1.B
- c 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. KY.HS.F.1.C
- d Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. KY.HS.F.1.D
- e Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). KY.HS.F.1.E

  Alternate Assessment Target: Limit full standard to input and output numbers from negative 20 to 20.

  - a No further limitations
  - b No further limitations
  - c Limit to situations that do not include identification of symmetries, end behavior, or periodicity
  - d No further limitations
  - e Excluded from assessment

3 **Understand average rate of change of a function over an interval** KY.HS.F.3

- a Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. KY.HS.F.3.A
- b Estimate the rate of change from a graph. KY.HS.F.3.B

  Alternate Assessment Target: Limit the average rate of change to integers from negative 20 to 20 for full standard.

Geometry

1 **Know and apply precise definitions of the language of Geometry:** KY.HS.G.1

- a Understand properties of line segments, angles and circle. KY.HS.G.1.A
- b Understand properties of and differences between perpendicular and parallel lines. KY.HS.G.1.B

  Alternate Assessment Target: No limitations. All parts of the Kentucky Academic Standard are eligible to be included as an assessment item.

23 Find measurements among points within the coordinate plane. KY.HS.G.23

a Use points from the coordinate plane to find the coordinates of a midpoint of a line segment and the distance between the endpoints of a line segment. KY.HS.G.23.A

b Find the point on a directed line segment between two given points that partitions the segment in a given ratio. KY.HS.G.23.B

Alternate Assessment Target:

a Limit to midpoint and endpoints with coordinates within negative 20 and 20.

b Excluded for assessment

24 Use coordinates within the coordinate plane to calculate measurements of two dimensional figures. KY.HS.G.24

a Compute the perimeters of various polygons. KY.HS.G.24.A

b Compute the areas of triangles, rectangles and other quadrilaterals. KY.HS.G.24.B

Alternate Assessment Target: Limit full standard to coordinates from negative 20 to 20.

a Limit to rectangles, triangles and pentagon

b Limit to triangles and quadrilaterals (rectangles, parallelograms and trapezoids)

Statistics and Probability

6 Represent data on two quantitative variables on a scatter plot and describe how the explanatory and response variables are related. KY.HS.SP.6

a Calculate an appropriate mathematical model, or use a given mathematical model, for data to solve problems in context. KY.HS.SP.6.A

b Informally assess the fit of a model (through calculating correlation for linear data, plotting, calculating and/or analyzing residuals). KY.HS.SP.6.B

Alternate Assessment Target:

a Limit to a given mathematical model in quadrant one

b Limit comparison to examining the plot of the original data