Grade 12 (AAS): Algebra with Probability

Algebra and Functions

Functions shift the emphasis from a point-by-point relationship between two variables (input/output) to considering an entire set of ordered pairs (where each first element is paired with exactly one second element) as an entity with its own features and characteristics.

1 When given a relation in table form, identify the graph that represents the relation (Ex: The points (5,5); (6,4); (3,7) are given to the student along with three graphs, and the student chooses the graph that represents the relation). M.A.AAS.12.14

2 Graphs can be used to obtain exact or approximate solutions of equations, inequalities, and systems of equations and inequalities – including systems of linear equations in two variables and systems of linear and quadratic equations (given or obtained by using technology). M.A.AAS.12.15

3 Graphs can be used to obtain exact or approximate solutions of equations, inequalities, and systems of equations and inequalities – including systems of linear equations in two variables and systems of linear and quadratic equations (given or obtained by using technology). M.A.AAS.12.18

4 Functions can be described by using a variety of representations: mapping diagrams, function notation (e.g., f(x) = x2), recursive definitions, tables, and graphs. M.A.AAS.12.21

5 Functions can be described by using a variety of representations: mapping diagrams, function notation (e.g., f(x) = x2), recursive definitions, tables, and graphs. M.A.AAS.12.22

6 Functions that are members of the same family have distinguishing attributes (structure) common to all functions within that family. M.A.AAS.12.24

7 Functions can be represented graphically and key features of the graphs, including zeros, intercepts, and, when relevant, rate of change and maximum/minimum values, can be associated with and interpreted in terms of the equivalent symbolic representation. M.A.AAS.12.28

Functions can be represented graphically and key features of the graphs, including zeros, intercepts, and, when relevant, rate of change and maximum/minimum values, can be associated with and interpreted in terms of the equivalent symbolic representation.

8 Given the graph of a linear function, identify the intercepts, the maxima, and minima. M.A.AAS.12.30

Functions model a wide variety of real situations and can help students understand the processes of making and changing assumptions, assigning variables, and finding solutions to contextual problems.

9 Choose the graph of the linear function that represents a solution in a real-world scenario. (Ex: Choose the graph that shows a steady increase or decrease rather than a graph with fluctuating data). M.A.AAS.12.31