Topic: A1.2.1 Functions

$\label{eq:Key Learning} \textbf{Key Learning}(s) \textbf{:} \ \ \textbf{The students will}$

1. A1.2.1.1 Analyze and/or use patters or relations

Optional Instructional Tools:

Unit Essential Question(s):

How do you analyze and use patterns or relations?

Concept: A1.2.1.1.1 Analyze a set of data for the existence of a pattern and represent the pattern algebraically and/or graphically	Concept: A1.2.1.1.2 Determine whether a relation is a function, given a set of points or a graph.	Concept: A1.2.1.1.3 Identify the domain or range of a relation (may be presented as ordered pairs, a graph, or table)
Lesson Essential Questions: How do you represent algebraically or graphically a set of data of a pattern?	Lesson Essential Questions: How do you determine whether a set of points or a graph represents a function?	Lesson Essential Questions: When given a set of ordered pairs, a graph or table how is the domain and range identified?
Vocabulary: algebraic, graphic, data, pattern	Vocabulary: Function, set	Vocabulary: Ordered pairs, x coordinate, y coordinate, domain, range

Concept:	Concept:	Concept:
Lesson Essential Questions:	Lesson Essential Questions: 1.	Lesson Essential Questions:
Vocabulary:	Vocabulary:	Vocabulary:

Attached Document(s):		

Additional Info:

2.8.A1.C; 2.8.A1.D;

Topic: A1.2.1

Key Learning(s): The students will interpret and/or use linear function and their equations, graphs, or tables, A1.2.1.2



Unit Essential Question(s):

 $\label{eq:Attached Document} \textbf{Attached Document}(s) :$

How do you interpret and use linear functions and their equation, graphs, or tables?

Concept: A1.2.1.2.1 Create, interpret, and/or use the equation, graph, or table a linear function	Concept: A1.2.1.2.2 Translate from one representation of a linear function to another (i.e. graph, table, and equation)	Concept:
Lesson Essential Questions: What is the process to create, interpret and use the equation or table in a linear function?	Lesson Essential Questions: How can you translate from one representation of a linear function to another?	Lesson Essential Questions: 1.
Vocabulary: equation, linear function	Vocabulary: translate, linear function	Vocabulary:

Concept:	Concept:	Concept:
Lesson Essential Questions: 1.	Lesson Essential Questions: 1.	Lesson Essential Questions:
Vocabulary:	Vocabulary:	Vocabulary:

Additional Info:		

Topic:

Key Learning(s): The students will
1. A1.2.2.1 Describe, compute, and/or use the rate of change (slope) of a line.

Optional Instructional Tools:

Unit Essential Question(s):

When given a line how can you describe, compute and use the rate of change?

Concept: A1.2.2.1.1 Identify, describe, and/or use constant rates of change	Concept: A1.2.2.1.2 Apply the concept of linear rate of change (slope) to solve problems	Concept: A1.2.2.1.3 Write or identify a linear equation when given The graph of the line Two points on the line, or The slope and a point on the line Note; Linear equation may be in point-slope, standard, and/or slope-intercept form
Lesson Essential Questions: What is the process to identify, describe and use constant rate of change?	Lesson Essential Questions: How do you apply the concept of linear rate of change to solve problems?	Lesson Essential Questions: When given a graph of the line, two points or the slope and a point on the line how do you write or identify the linear equation?
Vocabulary: rate of change, constant	Vocabulary: Linear rate, slope	Vocabulary: Linear equation, slope intercept form, point slope form

Concept: A1.2.2.1.4 Determine the slope and/or y-intercept represented by a linear equation or graph	Concept:	Concept:
Lesson Essential Questions: How do you determine the slope and y-intercept when it's represented by a linear equation or graph?	Lesson Essential Questions: 1.	Lesson Essential Questions:
Vocabulary: Y intercept, slope, linear equation	Vocabulary:	Vocabulary:

Attached Document(s):		

Additional Info:

2.9.A1.C; 2.8.A1.D

Topic: Coordinate Geometry

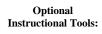
Key Learning(s): The students will A1.2.2.2 Analyze and/or interpret data on a scatter plot. Unit Essential Question(s): What and how do you analyze and/or interpret data on a scatter plot?		Optional Instructional Tools:		
Concept: A1.2.2.2.1 Draw, identify, find, and/or write an equation for a line of best fit for a scatter plot	Concept:	Concept:		
Lesson Essential Questions: How to you draw, identify, find and write an equation of best fir for a scatter plot?	Lesson Essential Questions: 1.	Lesson Essential Questions: 1.		
Vocabulary: Line of best fit, scatter plot	Vocabulary:	Vocabulary:		
Concept:	Concept:	Concept:		
Lesson Essential Questions:	Lesson Essential Questions:	Lesson Essential Questions:		
Vocabulary:	Vocabulary:	Vocabulary:		
Attached Document(s):				
Additional Info: 2.6.A.1.C				

Topic: Module 2: A1.2.3 Data Analysis

Key Learning(s): The students will A1.2.3.1 Uses measures of dispersion to describe a set of data		Optional Instructional Tools:	
Unit Essential Question(s): How do you use the measure of disp	ersion to describe a set of data?		
Concept: A1.2.3.1.1 Calculate and/or interpret the range, quartiles, and interquartile range of data	Concept:	Concept:	
Lesson Essential Questions: How do you calculate and interpret the range, quartiles, and interquartile range of data?	Lesson Essential Questions: 1.	Lesson Essential Questions: 1.	
Vocabulary: Range, quartiles, interquartile	Vocabulary:	Vocabulary:	
Concept:	Concept:	Concept:	
Lesson Essential Questions:	Lesson Essential Questions:	Lesson Essential Questions:	
Vocabulary:	Vocabulary:	Vocabulary:	
Attached Document(s):			
Additional Info: 2.6.A1.c			

Topic: Data Analysis

Key Learning(s): The students will use data displays in problemsolving settings and/or to make predications A1.2.3.2



Unit Essential Question(s):

What is do you need in order to make predication when given data displays in problems solving settings and/or to make predications?

Concept: A1.2.3.2.1 Estimate or calculate to make predications based on a circle, line, bar graph, measures of central tendency, or other representations	Concept: A1.2.3.2.2 Analyze data, make predications, and/or answer questions based on displayed data.	Concept: A1.2.3.2.3 Make predications using the equations or graphs of best-fit lines of scatter plots
Lesson Essential Questions: When given a circle, bar graph, measures of central tendency or other representations how do you estimate or calculate to make predications from the data given?	Lesson Essential Questions: What do you need in order to analyze date, make predications, and/or answer questions based on the data.	Lesson Essential Questions: How can you make predication using equations or graphs of best-fit lines of scatter plots?
Vocabulary: Circle graph, bar graph, measure of central tendency, prediction	Vocabulary: analyze	Vocabulary: Best fit line, scatter plot

Concept:	Concept:	Concept:
Lesson Essential Questions:	Lesson Essential Questions: 1.	Lesson Essential Questions:
Vocabulary:	Vocabulary:	Vocabulary:

Attached Document(s):	
Additional Info:	
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Key Learning(s): The students will A1.2.3.3 Apply probability to practical situations

Optional Instructional Tools:

Unit Essential Question(s):

How do you solve and apply probability of practical situations.

Concept: A1.2.3.3.1 Find probabilities for compound events and represent as a fraction, decimal, or percent	Concept:	Concept:
Lesson Essential Questions: When given compound events how do you find the probabilities of the events and represent it.	Lesson Essential Questions: 1.	Lesson Essential Questions: 1.
Vocabulary: Compound events, probability	Vocabulary:	Vocabulary:

Concept:	Concept:	Concept:
Lesson Essential Questions: 1.	Lesson Essential Questions: 1.	Lesson Essential Questions:
Vocabulary:	Vocabulary:	Vocabulary:

Attached Document(s):

 ${\bf Additional\ Info:}$

2.7.A1.A

Topic: Linear Equations A1.1.2

Key Learning(s): The students will

Write, solve, and/or graph linear equations using various

methods. A1.1.2.1

Optional Instructional Tools:

Unit Essential Question(s):

How do you write, solve, and/or graph linear equations using

various methods? A1.1.2.1

Concept: Write, solve, and/or apply a linear equation. A1.1.2.1.1	Concept: Use and/or identify an algebraic property to justify any step in an equation-solving process. A1.1.2.1.2	Concept: Interpret solutions to problems in the context of the problem situation	
Lesson Essential Questions: 1. How do you write, solve, and/or apply a linear equation?	Lesson Essential Questions: 1. How do you use and/or identify any step in an equation-solving process?	Lesson Essential Questions: 1. How do you interpret solutions to problems in the context of the problem situation?	
Vocabulary: Linear equation	Vocabulary:	Vocabulary:	

Concept:	Concept:	Concept:
Lesson Essential Questions: 1.	Lesson Essential Questions: 1.	Lesson Essential Questions:
Vocabulary:	Vocabulary:	Vocabulary:

Attached Document(s):		

Additional Info:

Enhanced Standards 2.1.A1.F, 2.8.A1.F

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Key Learning(s): The students will Optional Write, solve, and/or graph linear equations using various **Instructional Tools:** methods. A1.1.2.2 **Unit Essential Question(s):** How do you write, solve, and/or graph linear equations using various methods? Concept: **Concept: Concept:** Write and/or solve a system of linear Interpret solutions to problems in equations (including problem the context of the problem situations) using graphing, situation. Note: 2 systems substitution, and/or elimination. A1.1.2.2.2 A1.1.2.2.1 **Lesson Essential Questions: Lesson Essential Questions: Lesson Essential Questions:** 1. How do you solve a system 1. How do you solve a word of equations? problem system of equations? Vocabulary: Vocabulary: Vocabulary: System of equations Concept: **Concept: Concept: Lesson Essential Questions: Lesson Essential Questions: Lesson Essential Questions:** Vocabulary: Vocabulary: Vocabulary: **Attached Document(s): Additional Info:**

Topic: Linear Inequalities

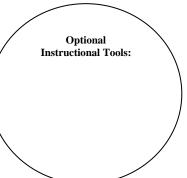
Key Learning(s): The students will

1. Write, solve and/or graph linear inequalities using various methods. A1.1.3.1

Unit Essential Question(s):

Attached Document(s):

How do you write, solve and/or graph linear inequalities using various methods?



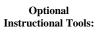
Concept: Write or solve compound inequalities and/or graph their solution sets on a number line (include absolute value inequalities). A1.1.3.1.1.	Concept: Identify or graph the solution set to a linear inequality on a number line. A1.1.3.1.2	Concept: Interpret solutions to problems in the context of the problem situation. A1.1.3.1.3	
Lesson Essential Questions: 1. How do you write or solve compound inequalities?	Lesson Essential Questions: 1. How do you identify or graph the solution set to a linear inequality on a number line?	1. How do you interpret solutions to problems in the context of the problem situation?	
Vocabulary: Compound inequalities, absolute value	Vocabulary:	Vocabulary:	

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Key Learning(s): The students will Write, solve and/or graph linear inequalities using various

methods. A1.1.3.1



Unit Essential Question(s):

How do you write, solve and/or graph linear inequalities using various methods?

Concept: Write and/or solve a system of linear inequalities using graphing. 2 systems only. A1.1.3.2.1	Concept: Interpret solutions to problems in the context of the problem situation. 2 systems only. A1.1.3.2.2	Concept:
Lesson Essential Questions: 1. How do you write and/or solve a system of linear inequalities using graphing?	Lesson Essential Questions: 1. How do you interpret solutions to problems in the context of the problem situation?	Lesson Essential Questions: 1.
Vocabulary:	Vocabulary:	Vocabulary:

Concept:	Concept: Rights and Responsibilities of Citizenship	Concept:
Lesson Essential Questions: 1.	Lesson Essential Questions: 1.	Lesson Essential Questions:
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Attached Document(s):	
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Key Learning(s): The students	will	Optional Instructional Tools:
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Key Learning(s): The students wi	11	Optional Instructional Tools:
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Key Learning(s): The students wi	Kev	Learning(s):	The	students	wi
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1. Represent and/or use numbers in equivalent forms A1.1.1.1

Optional Instructional Tools:

Unit Essential Question(s):

How can you represent equivalent forms of numbers?

Concept: Compare/Order Real Numbers A1.1.1.1	Concept: Simplify Square Roots A1.1.1.1.2	Concept:
Lesson Essential Questions: 1. How do you compare and/or real numbers?	Lesson Essential Questions: 1. How do you simplify a square root?	Lesson Essential Questions: 1.
Vocabulary: Ratioanl, Irrational Number	Vocabulary: Square Root	Vocabulary:

Concept:	Concept:	Concept:
Lesson Essential Questions: 1.	Lesson Essential Questions: 1.	Lesson Essential Questions:
Vocabulary:	Vocabulary:	Vocabulary:

Attached Document(s):		

Additional Info:

Enhanced standard: 2.1.A1.A

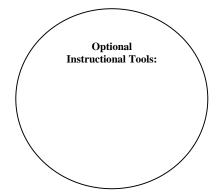
Key Learning(s): The students will Optional Apply number theory concepts to show relationships between real **Instructional Tools:** numbers in problem-solving settings. A1.1.1.2 **Unit Essential Question(s):** How do you apply number theory concepts to show relationships between real numbers in problem-solving settings? Concept: **Concept: Concept:** Find the Greatest Common Factor and/or the Least Will Common Multiple for sets of monomials. A1.1.1.2.1 **Lesson Essential Questions: Lesson Essential Questions: Lesson Essential Questions:** 1. How do you find the GCF and LCM? Vocabulary: Vocabulary: Vocabulary: GCF, LCM Concept: **Concept: Concept: Lesson Essential Questions: Lesson Essential Questions: Lesson Essential Questions:** Vocabulary: Vocabulary: Vocabulary: **Attached Document(s): Additional Info:** Enhanced Standard 2.1.A1.E

Key Learning(s): The students will

1. Use exponents, roots, and/or absolute values to solve problems. A1.1.1.3

Unit Essential Question(s):

How do you use exponents, roots, and/or absolute values to solve problems?



Concept: Simplify/evaluate expressions involving properties/laws of exponents, roots, and/or absolute values to solve problems.A1.1.3.1	Concept:	Concept:
1. How do you simplify/evaluate expressions involving properties/laws of exponents, roots and absolute values?	Lesson Essential Questions: 1.	Lesson Essential Questions: 1.
Vocabulary: Absolute value, exponents, roots	Vocabulary:	Vocabulary:

Attached Document(s):	
Additional Info:	
Enhanced 2.2.A1.C	

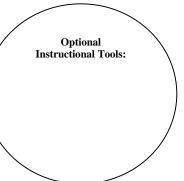
Key Learning(s): The students will Optional Use estimation strategies in problem-solving situations. **Instructional Tools:** A.1.1.4 **Unit Essential Question(s):** How do you use estimation strategies in problem solving situations? Concept: **Concept: Concept:** Use estimation to solve problems. A1.1.1.4.1 **Lesson Essential Questions: Lesson Essential Questions: Lesson Essential Questions:** 1. How do you use estimation to solve problems? Vocabulary: Vocabulary: Vocabulary: **Concept: Concept:** Concept: Rights and Responsibilities of Citizenship **Lesson Essential Questions: Lesson Essential Questions: Lesson Essential Questions:** Vocabulary: Vocabulary: Vocabulary: **Attached Document(s): Additional Info:** Enhanced 2.2A1.C

Kev	Learning(s):	The students	will

Key Learning(s): The students will Simplify expressions involving polynomials. A1.1.1.5

Unit Essential Question(s):

How do you simplify expressions involving polynomials?



Concept: Add, subtract, and/or multiply polynomial expressions? A1.1.1.5.1	Concept: Factor algebraic expressions, including binomials and trinomials? A1.1.1.5.2	Concept: Simplify/reduce a rational algebraic expression?
Lesson Essential Questions: 1. How do you add, subtract, and/or multiply polynomial expressions?	Lesson Essential Questions: 1. How do you factor binomials and trinomials?	Lesson Essential Questions: 1. How do you reduce a rational algebraic expression?
Vocabulary: Polynomial expressions	Vocabulary: Binomials, trinomials	Vocabulary: Rational algebraic expression

Concept:	Concept:	Concept:
Lesson Essential Questions: 1.	Lesson Essential Questions:	Lesson Essential Questions:
Vocabulary:	Vocabulary:	Vocabulary:

Attached	Document(s)	:
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Additional Info:

Enhanced Standard 2.8.A1.B

	Topic:	
Key Learning(s): The students will Unit Essential Question(s):		Optional Instructional Tools:
Concept:	Concept:	Concept:
Lesson Essential Questions:	Lesson Essential Questions:	Lesson Essential Questions:
Vocabulary:	Vocabulary:	Vocabulary:
Concept:	Concept:	Concept:
Lesson Essential Questions:	Lesson Essential Questions:	Lesson Essential Questions:
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Topic:		
Key Learning(s): The students	will	Optional Instructional Tools:
Unit Essential Question(s):		
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Vocabulary:	Vocabulary:	Vocabulary:
Concept:	Concept:	Concept:
Lesson Essential Questions: 1.	Lesson Essential Questions: 1.	Lesson Essential Questions:
Vocabulary:	Vocabulary:	Vocabulary:
Attached Document(s):		
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Topic:		
Key Learning(s): The students Unit Essential Question(s):	will	Optional Instructional Tools:
Concept:	Concept:	Concept:
Lesson Essential Questions:	Lesson Essential Questions:	Lesson Essential Questions:
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Lesson Essential Questions:	Lesson Essential Questions: 1.	Lesson Essential Questions:
Vocabulary:	Vocabulary:	Vocabulary:
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	Topic:	
Key Learning(s): The students	will	Optional Instructional Tools:
Unit Essential Question(s):		
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