Functions: 15 Day Pacing Guide

⭐ Students may use desmos graphing calculator throughout unit and on assessment.

Common Core State Standards

I can solve a system of linear and quadratic equations algebraically and graphically. (A.REI.7)
A.REI.7 Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. For example, find the points of intersection between the line $y = -3x$ and the circle $x^2 + y^2 = 3$

I can explain that the solution(s) of two functions are the x-coordinates of the intersections of those functions. (A.REI.11)
A.REI.11 Explain why the x-coordinates of the points where the graphs of the equations y = f(x) and y = g(x) intersect are the solutions of the equation f(x) = g(x); find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where f(x) and/or g(x) are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.

I can calculate and interpret the average rate of change from a function, table, and graph. (F.IF.6)
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.

I can compare quantities of two functions each represented in a different way (algebraically, graphically, numerically, or verbally). (F.IF.4, F.IF.9)
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.9 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).

I can relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. (F.IF.5)
F.IF.5 Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.

IXL Codes

11/18: E6A, HVZ
11/25 (Thanksgiving Break Week): PHD
12/2: 5ZY & W5Z
12/9: CNQ & TZZ

Day 1 (M-11/18)	Day 2 (T-11/19)	Day 3 (W-11/20)

Reward
 	
Students who score proficient from Rational & Radical Outcome Assessment will watch a movie and eat popcorn.
	• **(A.REI.7)** Solving systems of equations (linear & quadratic)
	  ○ Substitution
	
	Notes
	Elder Notes
	Substitution Worksheet
	Chaloupka Notes
	Graphing Worksheet - First 3 pages (through 9)
		• **(A.REI.7), (A.REI.11)** Solving systems of other equations.
		  ○ Graphing
		  ■ Linear
		  ■ Quadratic
		  ■ Absolute value
		  ■ Exponential
		Google Formand Spreadsheet

Day 4 (TR-11/21)	Day 5 (M-11/25)	Day 6 (T-11/26) Thanksgiving Break (11/27-11/29)

• **(A.REI.7)** Solving systems of equations (linear & quadratic
 	
Task Cards
 	
Task Card worksheet
 	
A.REI.7.11 Checkpoint
	• **(F.IF.6)** Average rate of change (Teaching, but not on OA)
	  ○ Function
	
	Notes
	
	Classwork
	
	Chaloupka Notes and Homework
	
	Elder Notes
	Homework
		• **(F.IF.6)** Average rate of change
		  ○ Graph
		  ○ Table
		Table Classwork Graph Classwork
		
		Graph and table Desmos
		
		*Make sure to review inequality notation for assessment question 8.
		
		F.IF.6 Checkpoint Key
		(Put checkpoint in as daily work grade due to absences with the break)

Day 7 (M-12/2)	**Day 8 (T - 12/3)**	**Day 9 (W-12/4)**
Rate of change activity Bingo	• **(F.IF.4, F.IF.9)**Comparing functions of different forms Task Cards	• **(F.IF.4, F.IF.9)**Comparing functions of different forms Assignment Chaloupka Notes
Day 10 (TR-12/5)	**Day 11 (M-12/9)**	**Day 12 (T-12/10)**
F.IF.4, 9 Checkpoint Key **Review of what we've done so far**	• **(F.IF.5)** Domains and their quantitative relationships Warm-up: Dependent & Independent Variables Lesson: Use the collaborative classwork questions 1-10 only Chaloupka Notes and Worksheet Worksheet PDF	• **(F.IF.5)** Domains and their quantitative relationships Warm-up - Review F.IF.4, 9 Checkpoint Worksheet F.IF.5 Checkpoint Key

Day 13 (W - 12/11)	Day 14 (TR - 12/12)	Day 15 (M - 12/16)
Review Key Possible Review Problems - Did Not use, but this could be a helpful resource for next year! Chaloupka Review	**Common Assessment** **Key**	Room 1: Reteach/Khan Academy (Chaloupka) Room 2: Reteach/Khan Academy (Hatch) Room 3: ACT/WY-TOPP Review (Elder)
Day 16 (T - 12/17)	**Day 17 (W - 12/18)**	**Day 18 (TR - 12/19)**
Room 1: Reteach/Khan Academy (Chaloupka) Room 2: Quiet (Just retakes) (Hatch) Room 3: Practice ACT/WY-TOPP Test (Elder)	Room 1: Reteach/Khan Academy/Self Care (Chaloupka) Room 2: Quiet (Just retakes) (Hatch) Room 3: Self Care (Elder)	Room 1: Quiet (Just retakes) (Hatch) Room 2: Self Care (Chaloupka) Room 3: Self Care (Elder)

Section A: A.REI.7	Section B: A.REI.11	Section C: F.IF.4 & 9	Section D: F.IF.5
khan academy video 1 khan academy video 2 Retake Key	khan video 1 khan video 2 problem set Retake Key	khan video problem set 1 Retake - Not changed from original Key	khan video 1 khan video 2 khan video 3 problem set Retake Key

Discriminant Worksheet

Khan Academy
Systems of Linear Equations Classwork

Factoring Classwork

F.IF.6 - Go through section and do corrections in red pen together

- Students that received a **12 or less** on the section - Watch the khan academy video, do the graphing khan academy problems, then do the worksheet
- Students that received a **13 or more** on the section do the worksheet

Worksheet

Retake Key

- Students that got **proficien**t on section

Color by number - Complex numbers

Complex Number Maze

A.REI.7 Reteach - Go through section and do corrections in red pen together

- Students that did not receive proficient watch khan academy video 1 and khan academy video 2. Then do worksheet page 755; 1-18 only.

Retake Key

A.REI.11 Reteach - Go through section and do corrections in red pen together

- Students that did not receive proficient watch khan video 1 and khan video 2. Then do problem set.

Retake Key

F.IF.4, 9 Reteach - Go through section and do corrections in red pen together

- Students that did not meet proficient watch khan video and do problem set 1.

Retake - Not changed from original Key

F.IF.5 Reteach - Go through section and do corrections in red pen together

- Students that did not receive proficient watch khan video 1, khan video 2, and khan video 3. Then do problem set

Retake Key

Enrichments

Students that got **proficien**t on all sections
Color by number - Complex numbers

Complex Number Maze

Number Puzzle

Tower of Hanoi Game

- Online version

Sudoku