Unit Topic	Algebra II Unit 3 - Relations, Functions, and Graphs
Standards	CC.2.2.8.B.3, CC.2.2.8.C.1, CC.2.2.8.C.2, CC.2.2.HS.C.2, CC.2.2.HS.D.7, CC.2.2.HS.D.10

Unit Essential Question How do you work with relations, functions and graphs?

Lesson 1 Focus
Relations, ordered pairs and graphing

Standards
CC.2.2.8.C.2, CC.2.2.HS.C.2

Students Will Know… (Key Vocabulary)
ordered pairs, domain, range, quadrants

Students Will Be Able To…
1. Find a Cartesian product. 2. List elements of a relation. 3. List the domain and range of a relation. 4. Graph ordered pairs. 5. Determine whether an ordered pair is a solution of an equation. 6. Graph equations.

Lesson Essential Question 1
How do you find domain and range and graph relations?

Lesson 2 Focus
Functions

Standards
CC.2.2.8.C.1, CC.2.2.8.C.2, CC.2.2.HS.C.2

Students Will Know… (Key Vocabulary)
value of the function, vertical line test, step function, greatest integer, absolute value, step

Students Will Be Able To…
1. Recognize functions and their graphs. 2. Use function notation to find function values. 3. Find the domain of a function given its formula. 4. Graph special functions. 5. Find the composite of two functions.

Lesson Essential Question 2
How do we work with functions?

Lesson 3 Focus
Graphing Linear Equations

Standards
CC.2.2.HS.D.7, CC.2.2.HS.D.10

Students Will Know… (Key Vocabulary)
linear, y-intercept, x-intercept

Students Will Be Able To…
1. Recognize linear equations. 2. Graph linear equations. 3. Graph equations whose graphs are parallel to an axis.

Lesson Essential Question 3
How do we graph linear equations?

Lesson 4 Focus
Slope

Standards
CC.2.2.8.C.2

Students Will Know… (Key Vocabulary)
slope, point-slope equation

Students Will Be Able To…
1. Fid the slope of a line given two points on it. 2. Find the slopes of horizontal and vertical lines. 3. Find the point-slope equations of a line.

Lesson Essential Question 4
How do we use slope?

Lesson 5 Focus
Equations of lines

Standards
CC.2.2.8.B.3, CC.2.2.HS.D.7, CC.2.2.HS.D.10

Students Will Know… (Key Vocabulary)
2-point equation, slope-intercept equation, standard form, parallel, perpendicular

Students Will Be Able To…
1. Find the 2-point equation of a line. 2. Find the slope and y-intercept of a line. 3. Graph equations. 4. Find the standard form. 5. Determine if lines are parallel or perpendicular. 6. Write the equation of a parallel or perpendicular line.

Lesson Essential Question 5
How do you write and graph equations?

Major Unit Assignment