

Grade: 8 Math 1Benchmark #: 8.3.4.K1a-d Slope		Mastery Check 4		
State Language: Uses the coordinate plane to :a) list several pairs on the graph of a line and find the slope of the line; b) recognize that ordered pairs that lie on the graph of an equation are solutions of that equation; d) determine the length of a side of a figure drawn on a coordinate plane with vertices having the same x or y coordinates.		Student Friendly Language: Uses the coordinate plane to plot points to find the slope of a line. Recognize that ordered pairs that are on the line are solutions to that equation. Determine the length of the side of a figure drawn on the coordinate plane.		
Concept (Students will know): <ul style="list-style-type: none"> • Know what ordered pairs are • Know that the x axis is the horizontal line and the y axis is the vertical line. • An ordered pair is a point on a line. • How to plot points on a coordinate plane • Definition of slope • How to find the slope of a line. • Know how to substitute ordered pairs into an equation to see if they are a solution of the equation. • Know what a “solution of an equation” means. • Understand that ordered pairs that satisfy an equation will lie on the line of that equation • Understand that ordered pairs that do not fit into an equation to make it true will <i>not</i> lie on the line of that equation. • The slope formulas, a) for the graph, b) if you know the ordered pairs and don't have the graph. • Know what the x and y intercept is. • What positive slope, negative slope, no slope and undefined (zero) slope is • What ordered pair makes a horizontal or vertical line. • What the equation is of a vertical or horizontal line is. • How to find the length of a side if a figure on the coordinate plane 		Skills (Students will do): <ul style="list-style-type: none"> • Plot points on a graph • Find the slope of a line with both methods. • Substitute an ordered pair into an equation to see if the point is a solution or not (lies on the line or not) of that equation. • Find the x or y intercept of a line (equation) • Differentiate between positive, negative, zero (undefined) and no slope. • Identify the equation of horizontal or vertical lines. • Determine the ordered pair that is a solution of a horizontal or vertical line. • Find the length of a side of a shape on a coordinate plane • Determine which axis is the x and y axis. 		DOK Level: 2 1/2
Big Ideas: Determine the slope of a line and the equation that makes a line.				
Essential Questions: <ul style="list-style-type: none"> • How do you plot an ordered pair on a coordinate plane? • How do you find the slope of a line, given an ordered pair? • How do you find the slope of a line when the line is on the graph? • How do you find out if an ordered pair is a solution of an equation? • What are the x and y intercepts? • How do you find the x or y intercept of an equation? • Describe the ordered pair that makes a horizontal or vertical line. • How do you determine the length of a side of an object that is on a coordinate line? 				
Core Materials Glencoe Pre-algebra book		Supplemental Materials: Glencoe Resource books Study Island Teacher generated materials Graph paper Manipulatives to show slope of a line		

Teaching Strategies:

Show how a slope looks by using books stacked and a ruler. Show different types of slope, like stairs.

Use graph paper to show counting up and over to show the slope.

Show why the slope formula works, with the ordered pairs.

Guided practice

Mastery Check Items: