## September 02, 2013

## Lesson 1.7 Midpoint and Distance in the Coordinate Plane

Getting Ready!	A> X	e
In a video game, two ancient structures shoot light beams toward each other to form a time portal. The portal forms exactly halfway between the two structures. Your character is on the grid shown as a blue dot. How do you direct your character to the portal? Explain how you found your answer.	LEFT RIGHT UP DOWN	







Ex. midpoint of segment EF =



1 Segment JK has endpoints at -12 and 4 on a number line. What is the midpoint?

2 What is the midpoint of segment RS with endpoints R (5, -10) and S(3, 6)?

The midpoint of  $\overline{CD}$  is M(-2, 1). One endpoint is C(-5, 7). What are the coordinates of the other endpoint *D*?



3 The midpoint of segment AB has coordinates (4, -9). Endpoint A has coordinates (-3, -5). What are the coordinates of B? The distance between two points on a coordinate plane can be found by:  $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ .



Ex. Find the distance between (-4, 5) and (3, 7).

4 What is the distance from S(-2, 14) to R(3, -1)? (Round to the nearest tenth)

Ex. On a zip-line course, you are harnessed to a cable that travels through the treetops. You start at Platform A and zip to each of the other platforms. How far do you travel from Platform B to Platform C? Each grid unit represents 5 m.

