

**MIDPOINT, MEDIAN, & RIGHT BISECTOR****LEARNING GOALS**

Students will:

- Learn how to find the midpoint of a line segment.
- Learn how to find the median of a triangle.
- Learn how to find a right bisector.

**MIDPOINT**

The...

Slope		Formula
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Can be used to find the...

Midpoint		Formula
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How might you use the calculation of a midpoint in your lives?

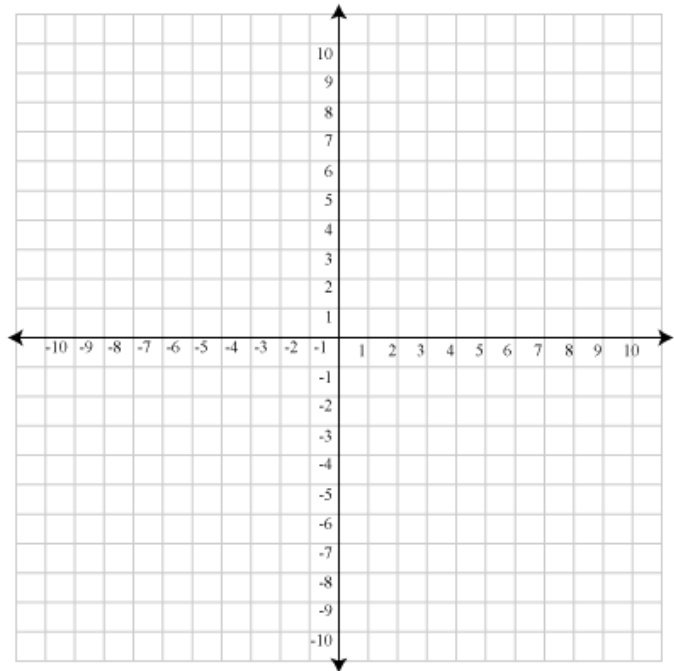
**EXAMPLE 1: FIND A MIDPOINT**

There are two hospitals located at coordinates A (3, 5) and B (11, 14). The city wants to build a new ambulance station halfway between the two hospitals. Determine the coordinates of this location.

Median	
Vertex	

**EXAMPLE 2: MEDIAN OF A TRIANGLE**

Determine an equation for the median from vertex C for the triangle with vertices  $C(5, 2)$ ,  $A(-3, 3)$ , and  $B(2, -5)$ .



Right Bisector	
Equidistant	

**EXAMPLE 3: EQUATION OF A RIGHT BISECTOR**

Two schools are located at points  $P(-1, 4)$  and  $Q(7, -2)$  on a town map. The school board is planning a new sports complex to be used by both schools. The board wants to find a location **equidistant** from the two schools. Use an equation to represent the possible locations for the athletic complex.

