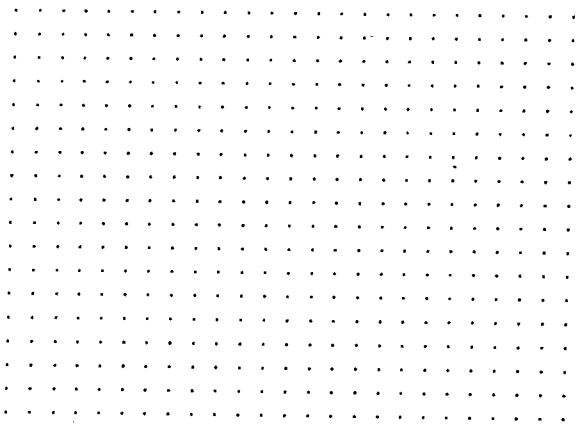
10 Academic Math **Triangle Properties**

Triangles come in all sorts of shapes. Some have a right angle to make them into a "right-triangle". Some have 3 equal sides to make them "equilateral" and so on.... What is common amongst all triangles is that they have 3 vertices, 3 sides and 3 angles that add up to 180°

The interior of a triangle has other properties as well. One of them is the **median.**

The **median** is a line segment that extends from a vertex to the mid-point of the opposite side.

Construct triangle ABC using **A**(-4,9) **B**(-2,1) and **C**(8,7) as the vertices. Construct the triangle and then construct the median from point A.

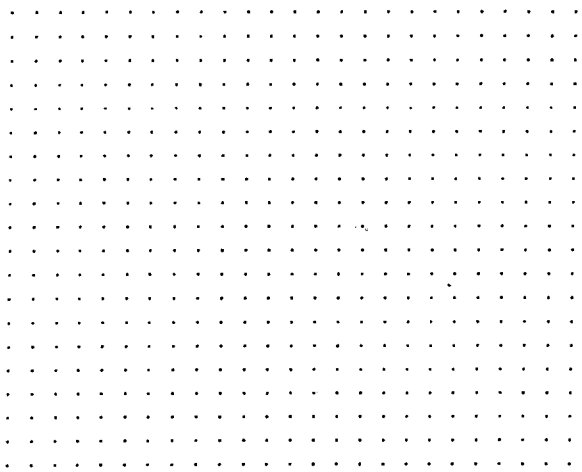


Determine the equation of the median from point **A**.

Another property is called the **altitude**.

The **altitude** is a line segment that extends from a vertex to the opposite side at a right angle making it perpendicular to the opposite side.

Construct triangle ABC using vertices **A** (-4,9) **B** (-2,1) and **C** (8,7).
Construct the altitude from point **B**.

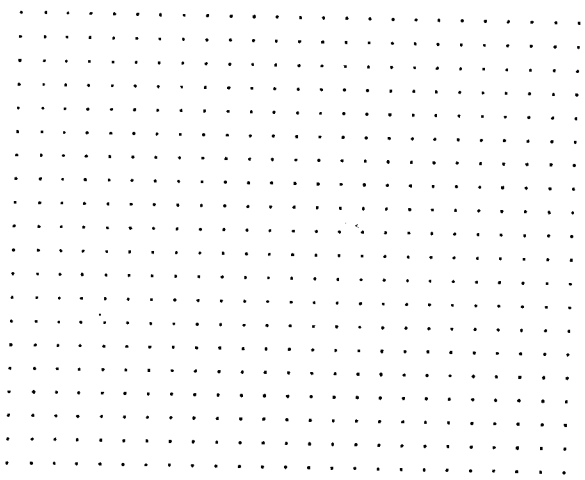


Determine the equations of the altitude from point B

A 3rd property is called the **perpendicular bisector of a side.**

The **perpendicular bisector** is a line that intersects a side at its mid-point and at a right angle.

Construct triangle ABC using vertices **A** (-4,9) **B** (-2,1) and **C** (8,7).
Construct the perpendicular bisector of side **AB**.



Determine the equations of the **perpendicular bisector** of side **AB**.