Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_

Mr. Kaufman Geometry

**Unit 1: Lesson 4 (Perpendicular Bisectors)**

**AIM:**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_?

**Do Now:** A **perpendicular bisector** of a segment passes through the \_\_\_\_\_\_\_\_\_\_\_\_\_ and forms \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (90° angles) with the segment.

Experiment with a compass to create a perpendicular bisector for this line segment.



**Steps to Constructing a Perpendicular Bisector:**

1.

2.

3.

4.

**Independent Practice: Draw two line segments below and construct their perpendicular bisectors.**

**Fill in the following observation based on your constructions.**

Any point on the perpendicular bisector of a line segment is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the endpoints of the line segment.

(**equidistant -** a point A is considered equidistant from points C and B if the length of AC and AB are the same)

**You know how to construct the perpendicular bisector of a segment. Now, you will investigate how to construct a perpendicular to a line L from a point A not on L. The first two steps of the instructions have been provided for you. Discover the construction and write the remaining steps.**

1. Draw circle A with its center at point A and a radius

so that circle A intersects line L in two points.



2. Draw circle B with center B and radius BC.

3.

4.

5.

6.

**Final Exercise:** Divide line segment AB into four equal parts. (Use your compass.)

