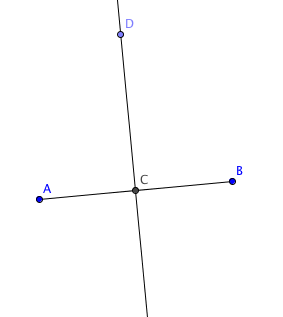
**Activity 5.2.1a The Perpendicular Bisector as a Locus of Points**

Use a ruler and protractor to make measurements on the figure below.

1. Measure the distances *CA* and *CB*. What do you notice?
2. *C* is the \_\_\_\_\_\_\_\_\_\_\_\_ of .
3. Measure *DCB*. What do you notice?
4. is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_to .
5. is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of .
6. Measure the distances *DA* and *DB*. What do you notice?
7. Now place more points *E*, *F*, and *G* on .
8. Measure these distances

*EA* = \_\_\_\_\_\_\_\_\_\_ *EB* = \_\_\_\_\_\_\_\_\_\_\_\_

*FA* = \_\_\_\_\_\_\_\_\_\_ *FB* = \_\_\_\_\_\_\_\_\_\_\_\_\_

*GA* = \_\_\_\_\_\_\_\_\_\_ *GB* = \_\_\_\_\_\_\_\_\_\_\_\_\_

What do you notice?

1. Make a conjecture about all points that lie on

1. Now place a point *H* in the plane that is not on . Measure *HA* and *HB*. What do you notice?
2. Try to find a point *J* in the plane that is not on so that *JA* = *JB.* What do you notice?
3. Make a conjecture about all points that are equidistant from points *A* and *B*.