Interesting Coplanar Locations (2)

1) In the applet on your screen, you'll notice a segment with endpoints *A* and *B* and a slider with name *r*.

2) Use the tools of the limited toolbar to construct the perpendicular bisector of $\overline{AB}$.

3) Use the **Point on Object** tool to plot a point *D* that lies on this perpendicular bisector.

4) Now use the **Distance** tool to measure and display the values of the distances *DA* and *DB*.

5) Move point *D* along this perpendicular bisector. What do you notice about *DA* and *DB*?

6) Based upon your observation in (5), we can conclude that *D* is _____ from *A* and *B*.

7) **Thus, if a point lies on the** _____ _____

   of a _____ **, then that point is** _____ **from the**

   _____ **of that** _____ **.**

8) How does this theorem (in 7) compare with the theorem you discovered in the **Interesting Coplanar Locations (1)** activity (previous lesson)?