

1. On a clean sheet of paper, draw a segment, label it \overline{PQ} .
2. Fold your paper over so that endpoints P and Q coincide (land exactly on top of each other). Crease your paper along the fold.
3. Unfold your paper. Draw a line in the crease. Does the line appear to be the perpendicular bisector of \overline{PQ} ? Check with your ruler and protractor to verify that the line in the crease is indeed the perpendicular bisector of \overline{PQ} .

How would you describe the relationship of the points on the perpendicular bisector with the endpoints of the bisected segment?

4. Place three points on your perpendicular bisector. Label them A , B , & C . With your compass, compare the distances PA and QA . Compare the distances PB and QB . Compare the distances PC and QC .

What do you notice about the two distances from each point on the perpendicular bisector to the endpoints of the segment? State a conjecture.

Conjecture

Given: $\overline{CD} \perp \overline{AB}$, \overline{CD} bisects \overline{AB}
Prove: $DA = DB$

