Geometry
Quiz 3

Name:_____

You have 10 minutes to complete this quiz. If you have a question raise your hand and remain seated. In order to receive full credit your answer must be **complete**, **legible** and **correct**. Show your work, and give adequate explanations.

(1) Define what it means for a point to be interior to an angle.

A point D is interior to $\angle BAC$ if it is on the same side of AB as C and the same side of AC as B.

(2) Suppose that D is interior to $\angle BAC$. Prove that B and C are on opposite sides of line AD.

If D is interior to $\angle BAC$, then the Crossbar Theorem guarantees that ray $\overrightarrow{AD}$ intersects segment $\overline{BC}$. B and C cannot be on line AD, but $\overline{BC}$ meets AD, which is what it means for B and C to be on opposite sides of AD.