

Math 431 Homework 6
Due 10/30

1. Let P and Q be two points and l and m two lines. What can you say about these points and lines if you know that $\text{side}(P, l) \cap \text{side}(Q, m) = \emptyset$? In the event that there is a point $L \in \{l\}$ such that $P * L * Q$ and $M \in \{m\}$ such that $P * M * Q$ show that $L * M * Q$ and $P * L * M$.
2. Prove Proposition 3.8: If D is in the interior of an $\sphericalangle CAB$ then:
 1. so is every point on \overrightarrow{AD} except A ,
 2. no point on the opposite ray to \overrightarrow{AD} is in the interior of $\sphericalangle BAC$
 3. if $C * A * E$, then B is in the interior of $\sphericalangle DAE$
3. Exercise 6, page 104.