

MATH 476 – College Geometry

Homework Assignment 2 and Proofs 2

Homework:

Not due

1. Section 2.6: 1, 4, 5, 10
2. Section 3.1: 2, 4, 8, 11, 12, 13
3. Section 3.2: 12

Proofs:

Due Wednesday, September 20 (4 proofs)

1. Prove that the intersection of any collection of convex sets is convex.
2. Prove that a line and a point not on that line determine a unique plane.
3. Prove that if A and C lie on opposite sides of $\angle B$, then $\overline{AC} - \{A, C\} \subseteq \text{Int } \angle B$.
4. Suppose that $\overrightarrow{AB} \perp \overrightarrow{AC}$, and $\overrightarrow{AC} \perp \overrightarrow{AD}$, where $D \notin \overrightarrow{AB}$. Prove that $\overrightarrow{AB} \cup \overrightarrow{AD}$ is a line.