1. Finish the proof of Pappus’ Theorem by showing that \( \overrightarrow{P_1'Q_2'} \parallel \overrightarrow{P_2'Q_1'} \) even if \( \ell_1' \parallel \ell_2' \).

2. Prove that \( \sim \) on \( \mathbb{R}^3 - \{(0,0,0)\} \) is an equivalence relation.

3. Prove that every projective plane has at least 7 points.

4. Prove that every line contains at least three distinct points. Note that Axiom 1 does not imply that every line contains at least two points!

5. Prove that every point is contained in at least three distinct lines.