Lesson 12: Proposition 1.7 & 1.8

Propositions

Proposition 1.1: We can make an equilateral triangle on a given finite straight line.
Proposition 1.2: We can make a finite line equal to a given finite line on a given point.
Proposition 1.3: Given two unequal straight lines, cut off from the greater, a straight line equal to the less.
Proposition 1.4: If two triangles have two sides equal to two sides respectively and the angles contained by them are equal, then their bases are equal, the triangles are equal, and their remaining angles are equal.
Proposition 1.5: The angles at the base of an isosceles triangle are equal. And if the equal sides be extended, the angles under the base will be equal.
Proposition 1.6: The sides opposite the equal angles of a triangle are equal.

Proposition 1.7 (Theorem): Given two straight lines constructed from the ends of a straight line and meeting in a point, there cannot be constructed from the ends of the same straight line, and on the same side of it, two other straight lines meeting in another point and equal to the former two respectively, namely each equal to that from the same end.

HUH?! Let's reword this!
If two straight lines are constructed from the ends of a straight line meeting at a point, then there ***cannot*** *be two other straight lines of equal length as the others constructed on the same side that meet at a* ***different*** *point.*

Proof
Proof by contradiction.