Problem 5, Homework 6.

Prove the generalized version of the **Thales' theorem**:

Let l, m be two distinct lines. Let A, B, C be three *distinct* collinear points on the line l, and A', B', C' be three *distinct* collinear points on the line m. Assume that $AA' \parallel BB' \parallel CC'$. Prove that

$$\frac{|AB|}{|BC|} = \frac{|A'B'|}{|B'C'|}.$$