

Math 6140: Homework # 4.

There are only three problems in this assignment.

1. (See Figure 1.) Give the proof of Theorem 24 for Case (iii). Given: M and N are the midpoints of AB and AC , $MX \perp AB$, $NX \perp AC$, and X is on BC . To prove: X is on the perpendicular bisector of BC .

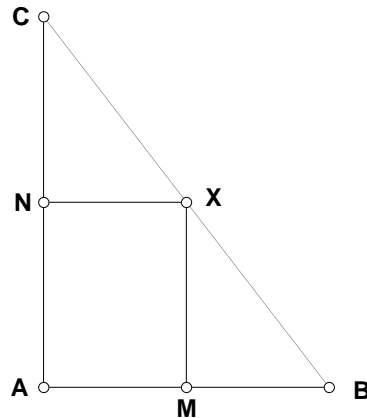


Figure 1

2. Prove Theorem 26. (Hint: Use ideas similar to those of the proof of Theorem 24, but note that there is only one case.) Make a picture to illustrate your proof with Geometer's Sketchpad.
3. Prove Theorem 27. Make a picture to illustrate your proof with Geometer's Sketchpad.