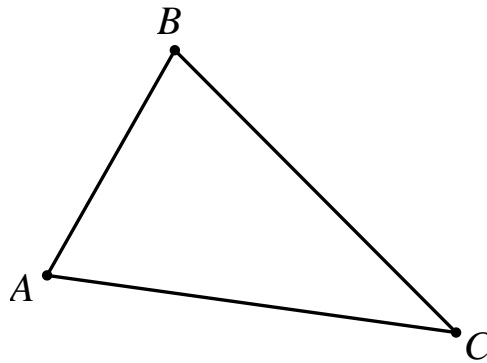
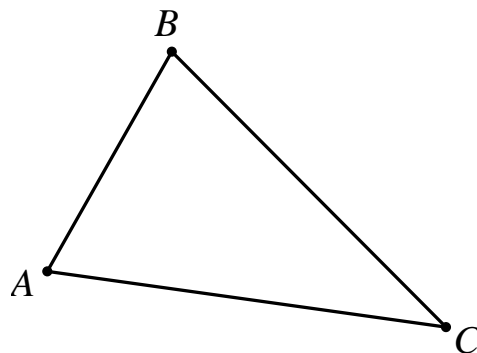


1. Theorem: *The Perpendicular Bisectors of the sides of a triangle intersect at a single point.*

Using triangle ABC, construct the perpendicular bisectors of all the sides. Do they intersect at a single point?

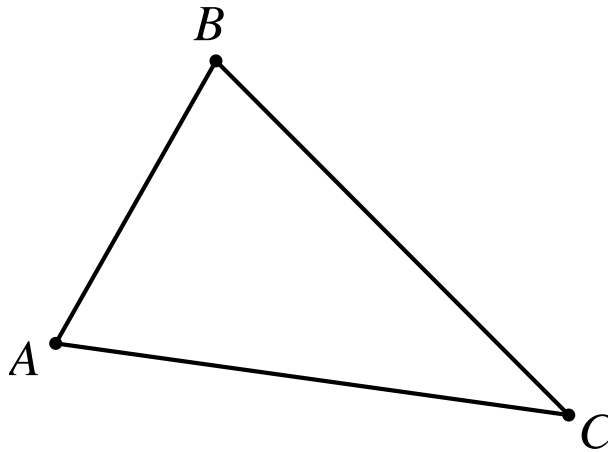


2a. Construct a line through point B that is parallel to side \overline{AC} .



b. State the postulate that guarantees that such a parallel line exists.

3a. Construct the midpoints of sides \overline{AB} and \overline{BC} . Label these points D and E, respectively.



b. Draw in segment \overline{DE} . How does the length of \overline{DE} compare to the length of \overline{AC} ? Explain how you can use your compass to support your answer.