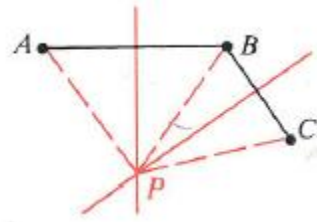p.141-142 #12, 13, 17a, 18

12. Given: P is on the perpendicular bisector of $\overline{AB}$;
    P is on the perpendicular bisector of $\overline{BC}$.
    Prove: $PA = PC$

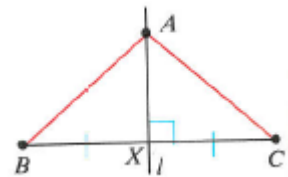13. Prove Theorem 3-5. Use the diagram on page 138.

From p.138

Theorem 3-5
If a point lies on the perpendicular bisector of a segment, then the point is equidistant from the endpoints of the segment.

Given: A is on l, the perpendicular bisector of $\overline{BC}$

Prove: $AB = AC$

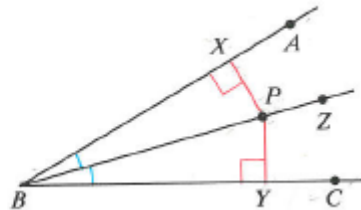17. Prove (a) Theorem 3-7 and (b) Theorem 3-8. Use the diagrams on page 139.

From p.139

Theorem 3-7
If a point lies on the bisector of an angle, then the point is equidistant from the sides of the angle.

Given: $\overrightarrow{BZ}$ bisects $\angle ABC$; P lies on $\overrightarrow{BZ}$;
        $\overline{PX} \perp \overrightarrow{BA}$; $\overline{PY} \perp \overrightarrow{BC}$

Prove: $PX = PY$

18. Given: $\overline{BE} \cong \overline{CD}$; $\overline{BD} \cong \overline{CE}$
    Prove: $\triangle ABC$ is isosceles.