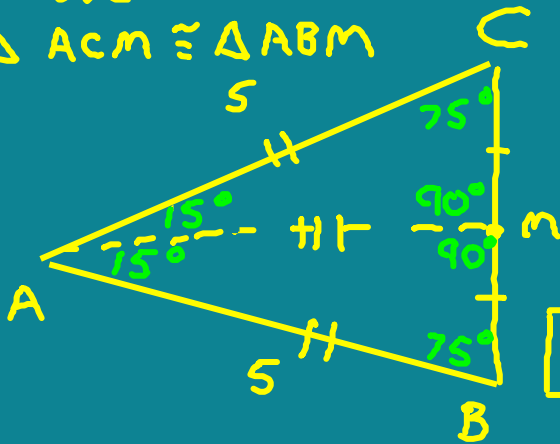


(a) Prove $\triangle ACM \cong \triangle ABM$



$$\overline{BM} = \overline{CM}$$

def. of midpoint

$$\overline{AM} \cong \overline{AM}$$

reflexive prop. of congruence

$$\overline{AC} \cong \overline{AB}$$

given

$$\triangle ACM \cong \triangle ABM$$

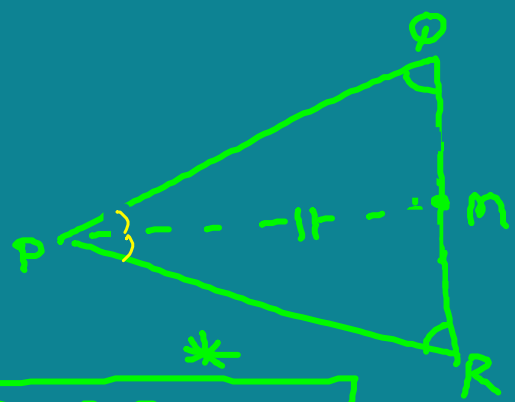
SSS

(b) Find $\angle AMB$ (90°)

$\angle AMB$ and $\angle AMC$ are congruent and supplementary so they must equal 90°

(c) $\angle ACB$ (75°)

Prove that if $\angle PQR = \angle PRQ$, then $PQ = PR$.



$\angle PQR \cong \angle PRQ$
given

Let MP be the angle bisector of $\angle QPR$

by construction

$\overline{PM} \cong \overline{PM}$

Reflexive Prop. of Congruence

$\triangle PQM \cong \triangle PRM$
AAS

$\angle QPM \cong \angle RPM$

$\overline{PQ} \cong \overline{PR}$ def. of angle bisector
Corresponding Parts of Congruent Triangles

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