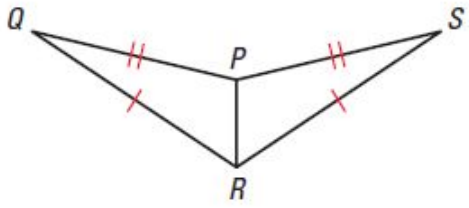
SchoolNova, Math 5b
Homework 17
Triangles - Part II
March 17, 2019

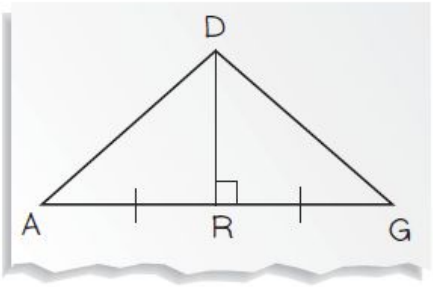
Please provide sufficient details about how you solved the problem. More difficult problems are marked with a $*$. If unable to solve a problem, please present your thoughts and any partial solution.

In the following problems, you will be utilizing the SSS and SAS Postulates for congruent triangles.

1. In the following figure, prove that $\triangle PQR \cong \triangle PSR$.

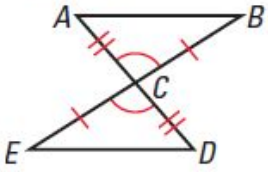


2. Given $\overline{DR} \perp \overline{AG}$ and $\overline{RA} \cong \overline{RG}$, show that $\triangle DRA \cong \triangle DRG$

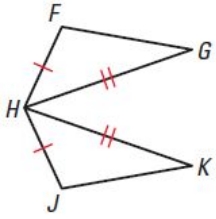


3. In the following figures, determine if there is enough information to determine the congruence of the given triangles. If so, which postulate would you use?

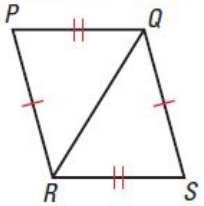
$\triangle ABC, \triangle DEC$



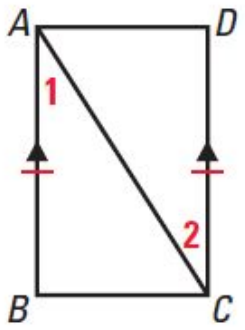
$\triangle FGH, \triangle JKH$



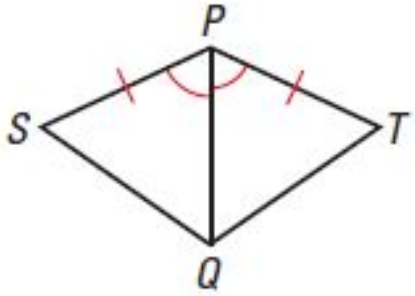
$\triangle PQR, \triangle SRQ$



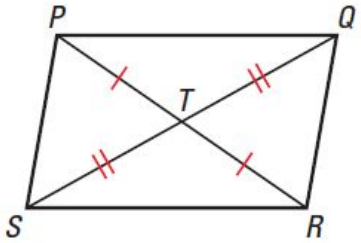
4. Given $\overline{AB} \cong \overline{CD}$ and $\overline{AB} \parallel \overline{CD}$, show that $\triangle ABC \cong \triangle CDA$.



5. Given $\overline{PQ}$ bisects $\angle SPT$, and $\overline{SP} \cong \overline{TP}$, prove that $\triangle SPQ \cong \triangle TPQ$.



6. Given $\overline{PT} \cong \overline{RT}$ and $\overline{QT} \cong \overline{ST}$, show that $\triangle PQT \cong \triangle RST$.



7. Use the distance formula and the SSS Congruence Postulate to show that $\triangle ABC \cong \triangle DEF$.