

Name: _____ Date: _____

Congruent Triangles and CPCTC Homework

1. $\triangle PQR \cong \triangle XYZ$. List three pairs of angles that are congruent.

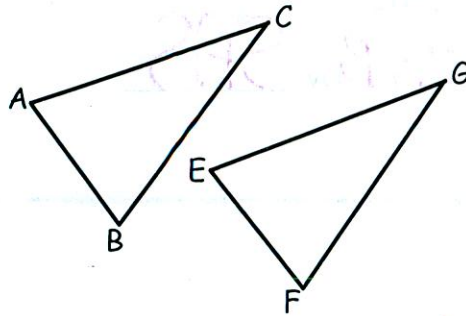
$\angle P \cong \angle X$ $\angle Q \cong \angle Y$ $\angle R \cong \angle Z$

2. $\triangle ABC \cong \triangle JKL$. List three pairs of sides that are congruent.

$\overline{AB} \cong \overline{JK}$ $\overline{BC} \cong \overline{KL}$ $\overline{AC} \cong \overline{JL}$

3. Suppose $\triangle ABC \cong \triangle EFG$. For each of the following, name the corresponding part.

- a. $\angle A$ $\angle E$
- b. $\angle BCA$ $\angle FGE$
- c. \overline{AC} \overline{EG}
- d. $\angle F$ $\angle B$
- e. $\angle GEF$ $\angle CAB$
- f. \overline{GE} \overline{CA}

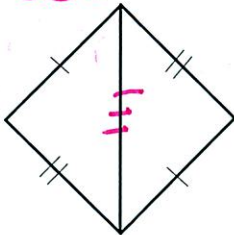


4. Suppose $\triangle AEB \cong \triangle DEC$. Which angle in $\triangle DEC$ corresponds to $\angle ABE$?

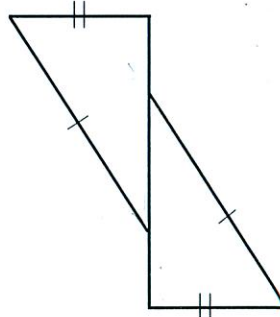
$\angle DCE$

If congruent, state the congruence postulate SSS, SAS, ASA, AAS, or HL. If not congruent, write none.

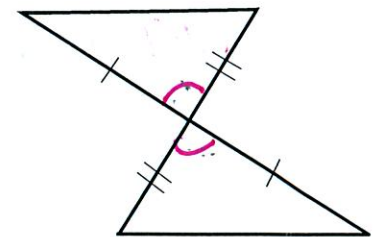
5. SSS



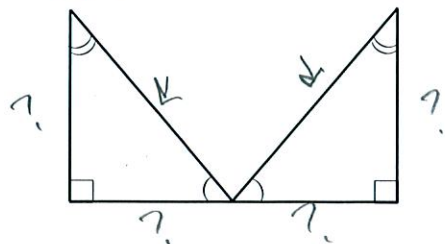
6. none



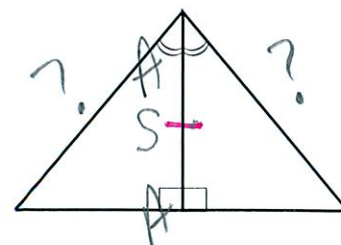
7. SAS



8. none

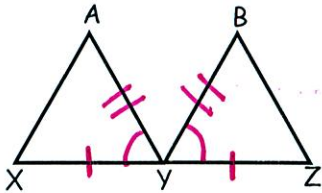


9. ASA



For the following problems, complete the triangle congruence statement and name the postulate that justifies the statement.

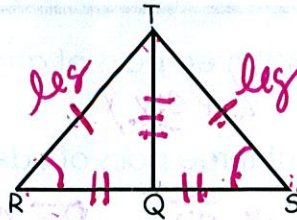
10.



Y is the **midpoint** of XZ, $AY \cong BY$ and $\angle AXA \cong \angle BZY$.

$\triangle XYA \cong \triangle ZYB$ by SAS

11.

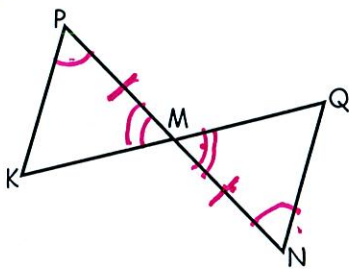


$\triangle RTS$ is **isosceles** with legs RT and TS. Q is the **midpoint** of RS.

$\triangle RTQ \cong \triangle STQ$ by SAS
SSS

Triangle with 2 congruent sides called legs.

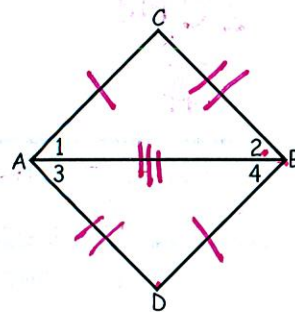
12.



$\angle P \cong \angle N$ and M is the **midpoint** of PN.

$\triangle PMK \cong \triangle NMQ$ by ASA

13.



$AC \cong BC$ and $AD \cong BD$

$\triangle ABD \cong \triangle BAC$ by SSS