Name _____ Date _____

## Day 4 – Triangles Congruence

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

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

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

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

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

a. $\angle A \cong \angle E$

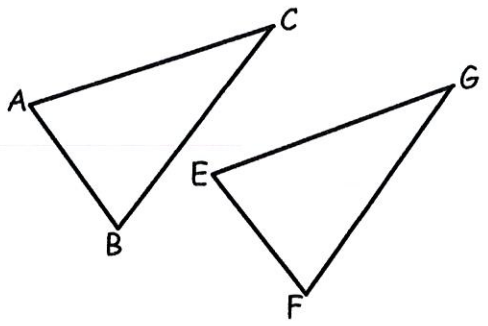
b. $\angle BCA \cong \angle FGE$

c. $\overline{AC} \cong \overline{EG}$

d. $\angle F \cong \angle B$

e. $\angle GEF \cong \angle CAB$

f. $\overline{GE} \cong \overline{CA}$

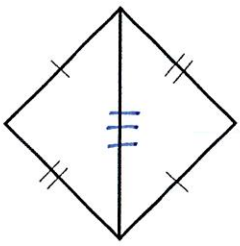



4. Suppose $\Delta AEB \cong \Delta DEC$. Which angle in $\Delta DEC$ corresponds to $\angle ABE$?

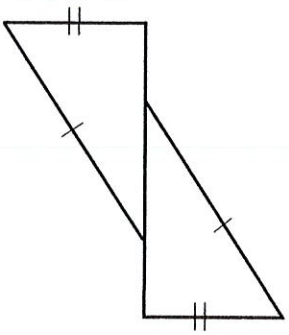
$\angle DCE$

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

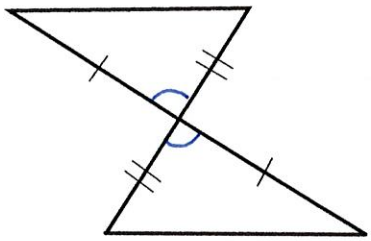
5. SSS



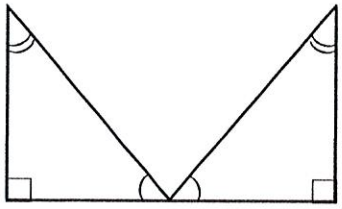
6. none



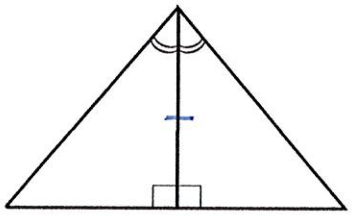
7. SAS



8. none

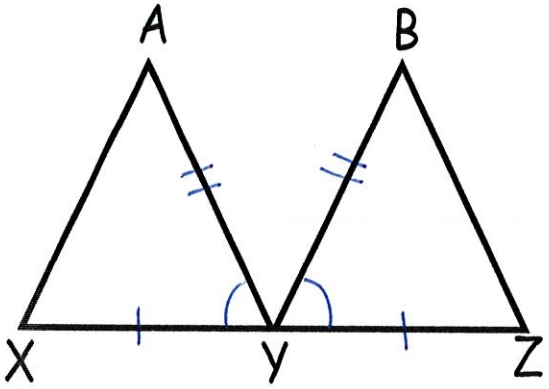


9. ASA



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

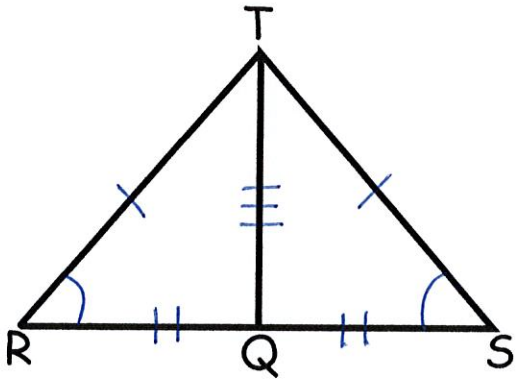
10.




Y is the **midpoint** of XZ, AY ≅ BY and ∠AYX ≅ ∠BYZ.

ΔXYA ≅ Δ ZYB by SAS

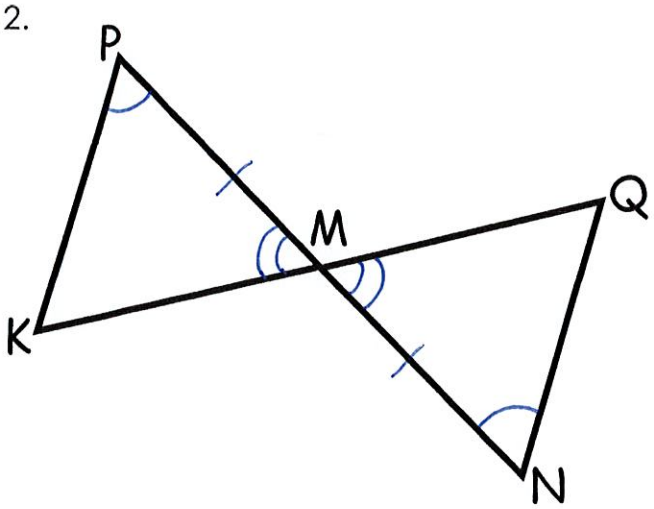
11.




ΔRTS is **isosceles** with legs RT and TS. Q is the **midpoint** of RS.

ΔRTQ ≅ Δ STQ by SSS OR SAS

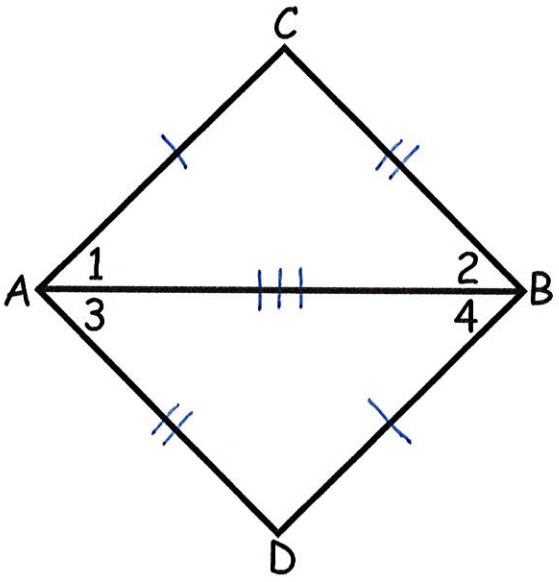
12.




∠P ≅ ∠N and M is the **midpoint** of PN.

ΔPMK ≅ Δ NMQ by ASA

13.




AC ≅ BD and AD ≅ BC

ΔABD ≅ Δ BAC by SSS