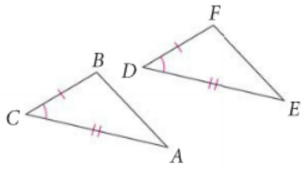
What is a postulate?

Postulate 4-2 **Side-Angle-Side (SAS) Postulate**

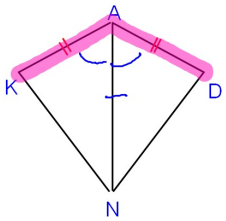
If two sides and the included angle of one triangle are congruent to two sides and the included angle of another triangle, then the two triangles are congruent.

$\triangle BCA \cong \triangle FDE$



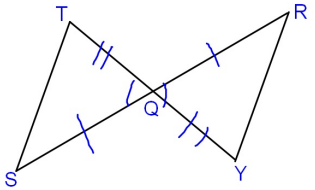
Can you use SAS to prove each pair of triangle congruent?
If yes, write a congruence statement.

1. AN bisects ∠KAD



△KAN ≅ △DAN

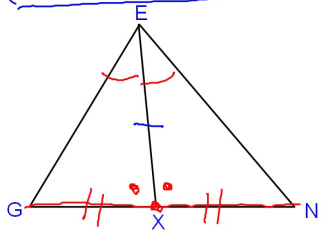
2. $\overline{RS}$ and $\overline{TY}$ bisect each other.



∠SQT ≅ ∠RQY

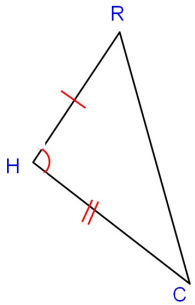
∠QYR ≅ ∠QTS

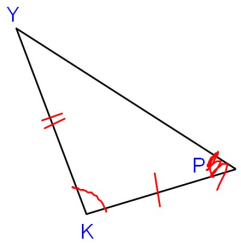
3. X is the midpoint of $\overline{GN}$
$\overline{EX}$ bisects ∠GEN



SAS

4.





SAS

△YKP ≅ △CHR

Each person take three straws and cut them to the following lengths.

11cm 14cm 9cm

Arrange these three straws on a piece of paper to form a triangle. Tape the straws in place.

How does your triangle compare with others? They should be the same

How many different triangles can be made with these three straws?

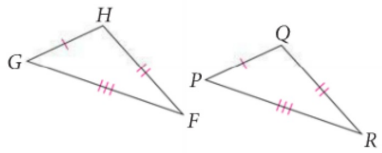
ONE

Postulate 4-1

Postulate 4-1 **Side-Side-Side (SSS) Postulate**

If the three sides of one triangle are congruent to the three sides of another triangle, then the two triangles are congruent.

$\triangle GHF \cong \triangle PQR$

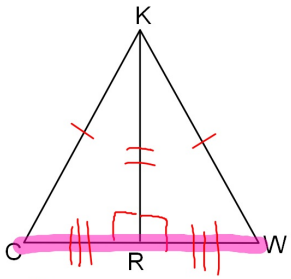


Ways to prove triangles are congruent:

1. SAS
2. SSS
3. AAS
4. ASA
5. HL

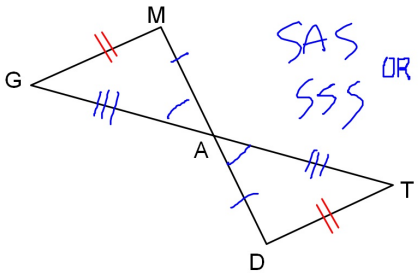
Is each pair of triangles congruent? If yes, give a reason and write a congruence statement.

1. $\overline{KR}$ is a $\perp$ bisector of $\overline{CW}$.



SAS or SSS $\triangle KRC \cong \triangle KRW$

2. $\overline{MD}$ and $\overline{GT}$ bisect each other



SAS OR SSS

$\triangle GMA \cong \triangle TDA$