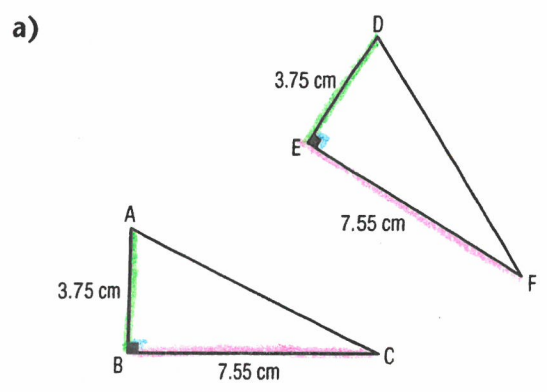
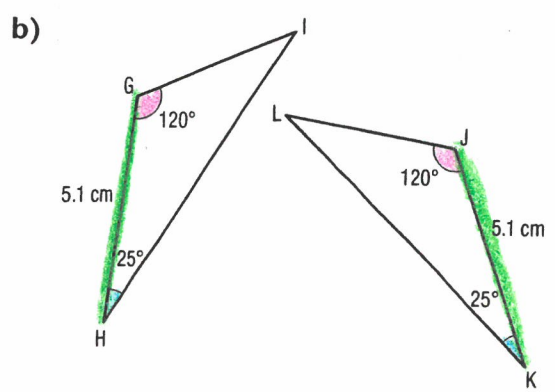


Congruent triangles

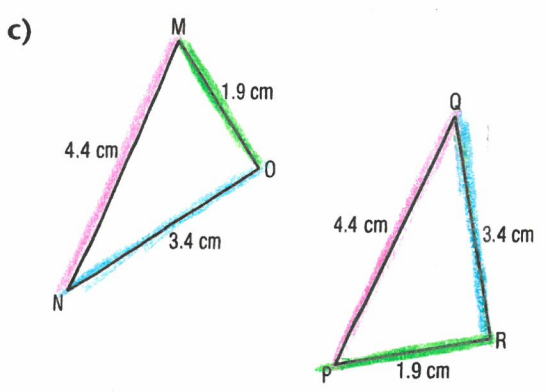
1 For each case, identify the geometric statement which allows you to state that the two triangles are congruent.



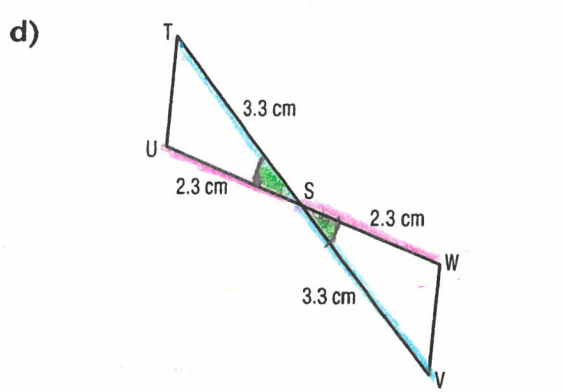
$\triangle ABC \cong \triangle DEF$ because of SAS



$\triangle GHI \cong \triangle JKL$ because of ASA

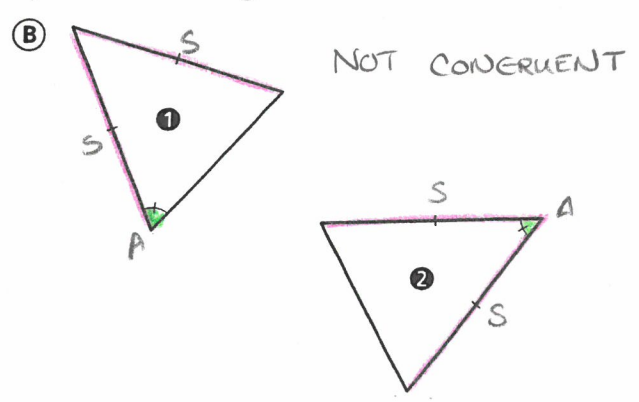
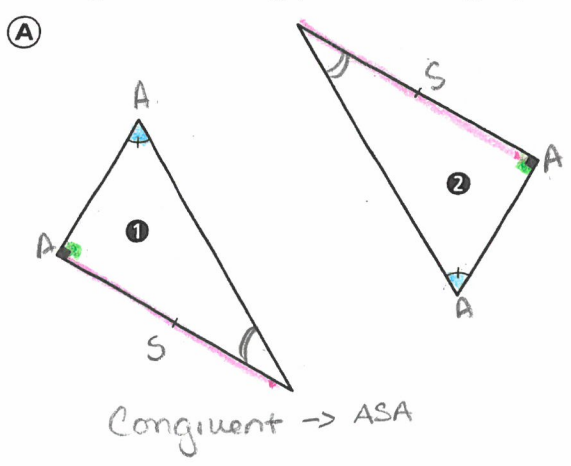


$\overline{MN} \cong \overline{PQ}$ $\overline{NO} \cong \overline{QR}$ $\overline{MO} \cong \overline{PR}$
 $\triangle MNO \cong \triangle PQR$ because of SSS



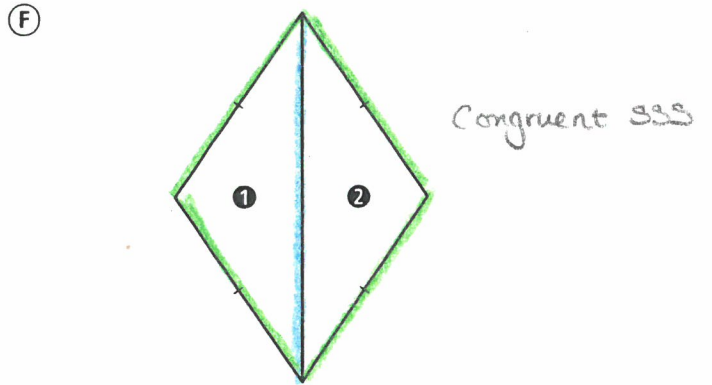
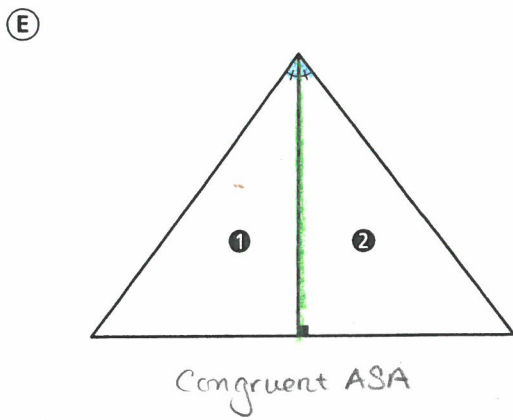
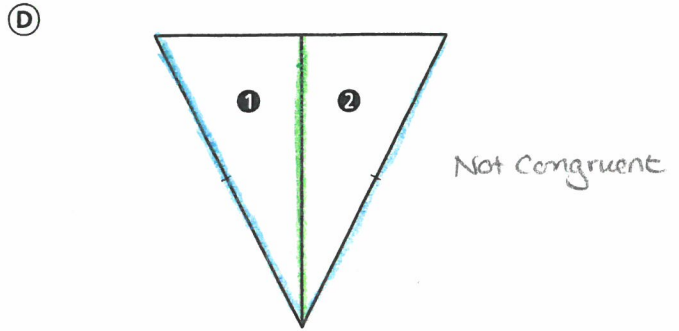
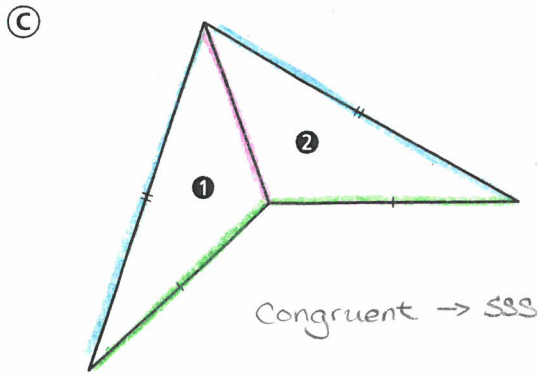
$\overline{TS} \cong \overline{SV}$ $\angle TSU \cong \angle VSW$ vertically opposite
 $\overline{US} \cong \overline{WS}$
 $\triangle TSU \cong \triangle VSW$ because of SAS

2 Among the following pairs of triangles, identify which are congruent.



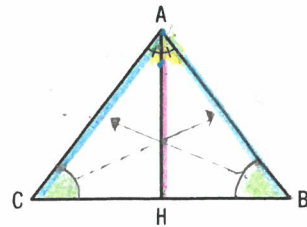
Name: Answer Key

Group: _____ Date: _____



3 In the adjacent illustration, $\triangle ABC$ is an isosceles triangle and \overline{AH} is the bisector of angle BAC . Complete the following proof so that it is possible to conclude that triangles ABH and ACH are congruent.

| | |
|-------------|--|
| Hypotheses: | Triangle ABC is isosceles. |
| | a) \overline{AH} is the bisector of $\angle BAC$ |
| Conclusion: | Triangles ABH and ACH are congruent. |



| STATEMENT | JUSTIFICATION |
|---|---|
| $\angle B \cong \angle C$ Angle | b) Angles opposite congruent sides of an isosceles triangle are congruent |
| $\overline{AB} \cong \overline{AC}$ side | By hypothesis, triangle ABC is isosceles. |
| $\angle BAH \cong \angle CAH$ Angle | c) \overline{AH} is the bisector of $\angle BAC$ |
| $\triangle ABH \cong \triangle ACH$ | d) ASA |