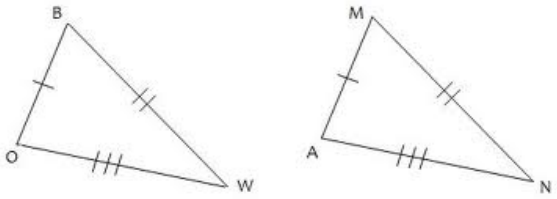
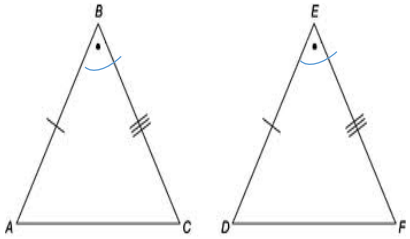
Name _____ Date _____

Write a congruence statement and tell which way you can tell that the triangles are congruent:

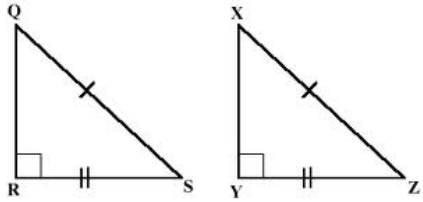
1.)



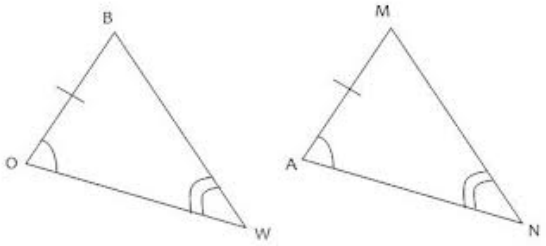
2.)



3.)

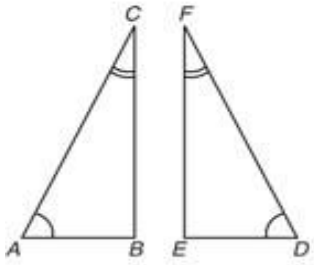


4.)



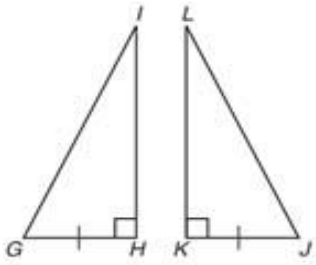
Name the additional part(s) that you would have to get congruent in order to prove that the triangles are congruent the way stated.

$\triangle ABC \cong \triangle DEF$ by AAS



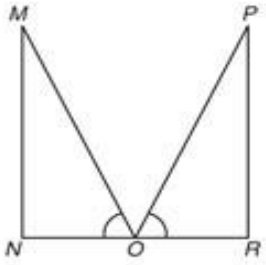
(a)

$\triangle GHI \cong \triangle JKL$ by HL



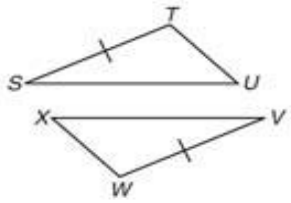
(b)

$\triangle MNO \cong \triangle PRO$ by SAS



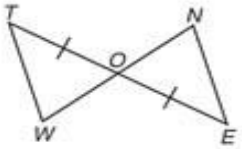
(c)

$\triangle STU \cong \triangle VWX$ by SSS



(d)

$\triangle ONE \cong \triangle OWT$ by ASA

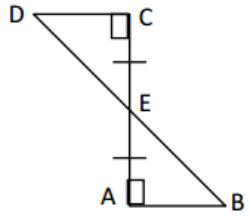


(e)

Name _____ Date _____

I. For each pair of triangles, tell: (a) Are they congruent (b) Write the triangle congruency statement. (c) Give the postulate that makes them congruent.

1.

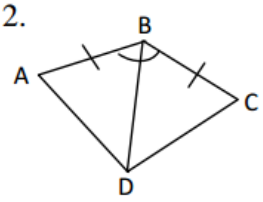


a. _____

b. Δ_____ ≅ Δ _____

c. _____

2.

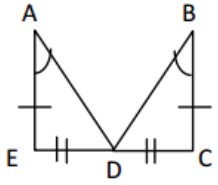


a. _____

b. Δ_____ ≅ Δ _____

c. _____

3.

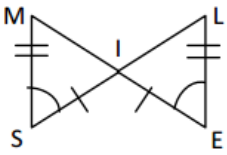


a. _____

b. Δ_____ ≅ Δ _____

c. _____

4.

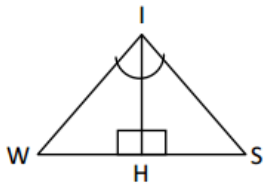


a. _____

b. Δ_____ ≅ Δ _____

c. _____

5.

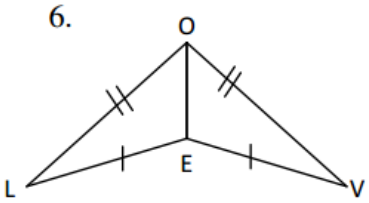


a. _____

b. Δ_____ ≅ Δ _____

c. _____

6.

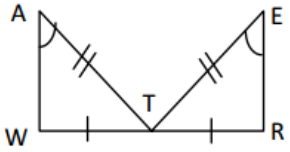


a. _____

b. Δ_____ ≅ Δ _____

c. _____

7.

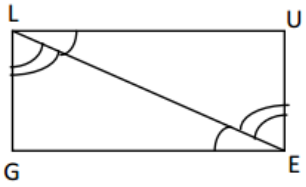


a. _____

b. Δ_____ ≅ Δ _____

c. _____

8.

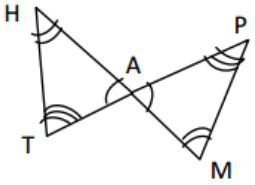


a. _____

b. Δ_____ ≅ Δ _____

c. _____

9.



a. _____

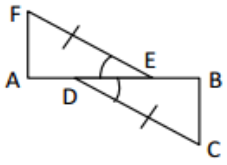
b. Δ_____ ≅ Δ _____

c. _____

State the missing parts of each triangle that must first be determined to be congruent in order to prove the triangles congruent by the given postulate.

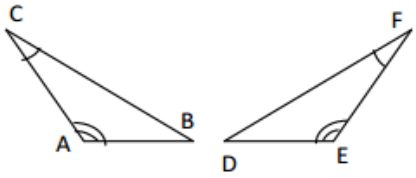
II. Using the given postulate, tell which parts of the pair of triangles should be shown congruent.

10. SAS



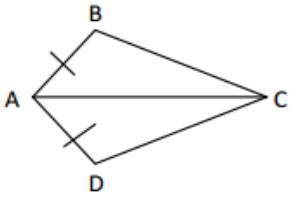
_____ ≅ _____

11. ASA



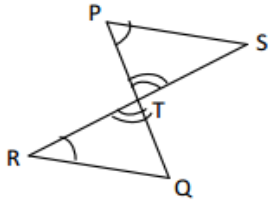
_____ ≅ _____

12. SSS



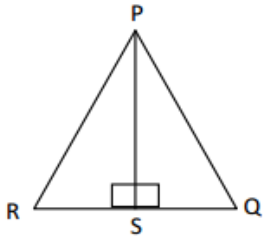
_____ ≅ _____

13. AAS



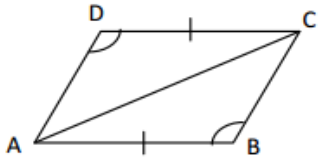
_____ ≅ _____

14. HL



_____ ≅ _____

15. ASA

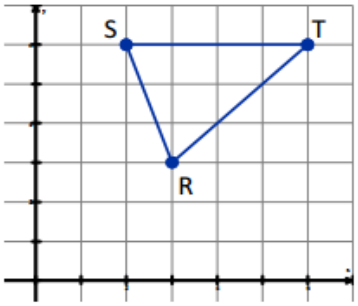


_____ ≅ _____

III. Multiple Choice

16. Which set of coordinates represents the vertices of a triangle congruent to ΔRST? (Hint: Find the lengths of the sides of ΔRST)

A. (3, 4) (3, 0) (0, 0)
B. (3, 3) (0, 4) (0, 0)
C. (3, 1) (3, 3) (4, 6)
D. (3, 0) (4, 4) (0, 6)



17. Given ΔABC and ΔDEF. Which of the following pairs of corresponding parts would correctly prove the triangles congruent by ASA?

A. $\angle B \cong \angle E, \angle A \cong \angle D, \overline{AB} \cong \overline{DE}$

B. $\angle C \cong \angle F, \angle A \cong \angle D, \overline{AB} \cong \overline{DE}$

C. $\angle B \cong \angle E, \angle C \cong \angle F, \overline{AB} \cong \overline{DE}$

D. $\angle B \cong \angle E, \angle A \cong \angle D, \overline{AC} \cong \overline{DF}$