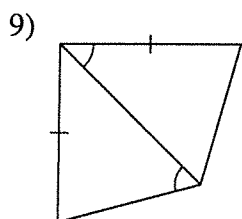
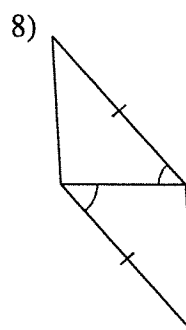
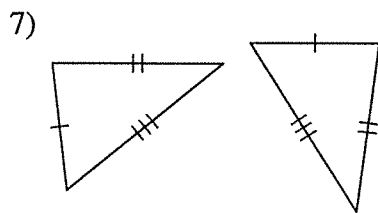
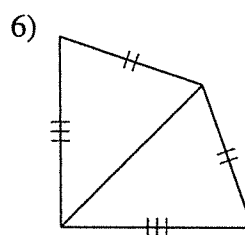
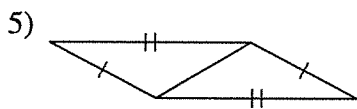
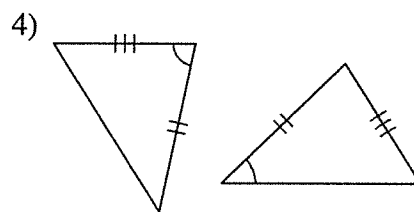
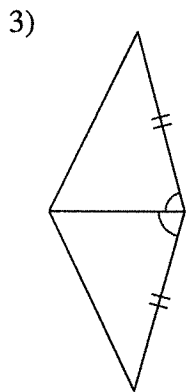
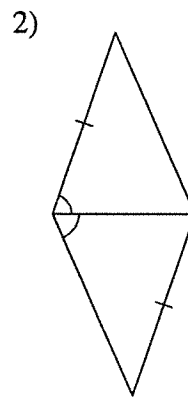
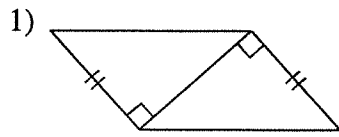


Name _____

Date _____ Period _____

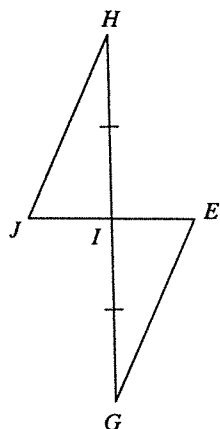
SSS and SAS Congruence

State if the two triangles are congruent. If they are, state how you know.

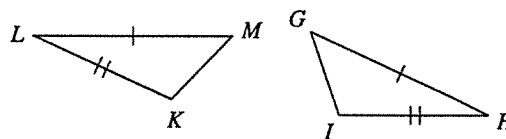


State what additional information is required in order to know that the triangles are congruent for the reason given.

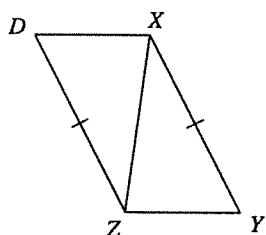
11) SAS



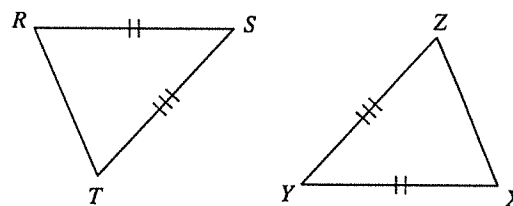
12) SAS



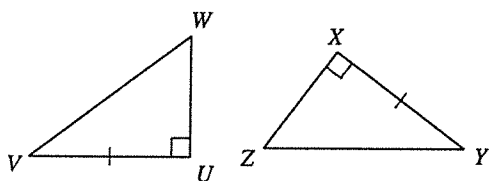
13) SSS



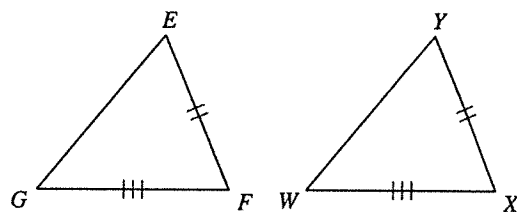
14) SSS



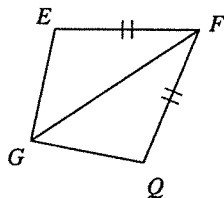
15) SAS



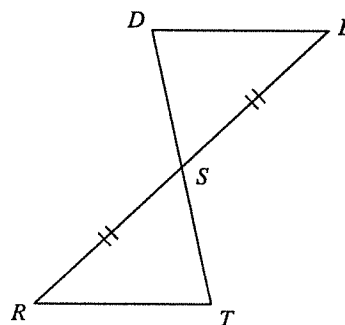
16) SSS



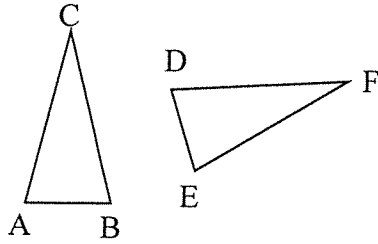
17) SAS



18) SAS



1) $\triangle ABC \cong \triangle DEF$.



a) Name 3 pairs of congruent sides: _____

b) Name 3 pairs of congruent angles: _____

c) $m\angle A = 70^\circ$, what is the measure of $\angle D$? _____

2) Quadrilateral $ABCD \cong$ Quadrilateral $QRST$.

$AB = 12$, $BC = 13$, $CD = 15$, $AD = 17$.

a) What angle is congruent to $\angle CDA$? _____

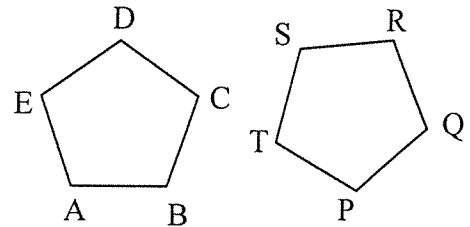
b) What side is congruent to RS ? _____

c) Find TQ . _____

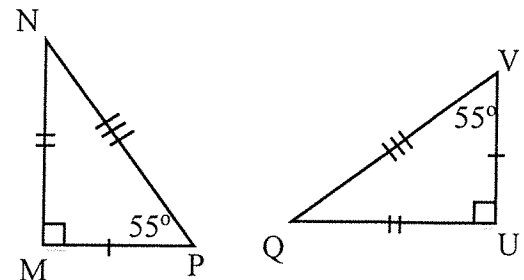
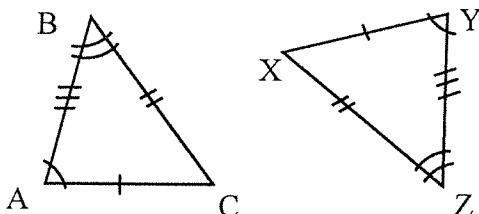
d) Find perimeter of $QRST$. _____

3) Pentagons $ABCDE$ and $PQRST$ are congruent.

If the length of DE is $(3x - 4)$ inches, and the length of ST is $(2x + 8)$ inches. What is the length of DE ?



4) Write a congruence statement for each pair of triangles

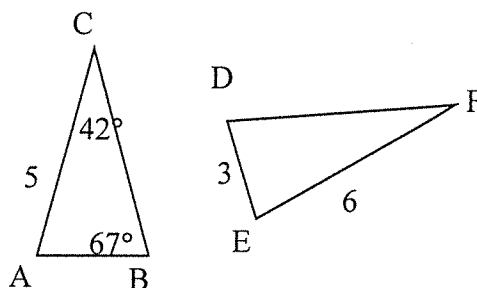


5) $\triangle ABC \cong \triangle DEF$.

$DF = \underline{\hspace{2cm}}$ $AB = \underline{\hspace{2cm}}$

$\angle A = \underline{\hspace{2cm}}$ $\angle D = \underline{\hspace{2cm}}$

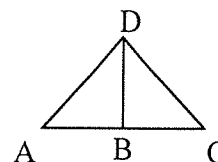
$\angle E = \underline{\hspace{2cm}}$ $\angle F = \underline{\hspace{2cm}}$



6) You make a photocopy of a picture. Are the original and the copy congruent?

You make another photocopy, but set the machine to reduce the image by 20%. Are the original and the copy congruent? Why?

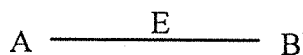
7) \overline{DB} is both the perpendicular bisector of \overline{AC} and an angle bisector $\angle ADC$.



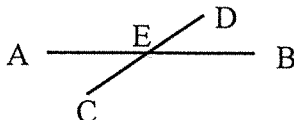
Considering $\triangle ABD$ and $\triangle CBD$, state all pairs of congruent sides and congruent angles, and explain why each pair is congruent. Do you have enough information to state that the triangles are congruent?

1) For each, name all pairs of congruent parts.

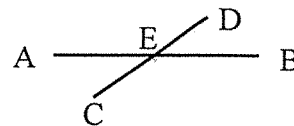
a) E is the midpoint of \overline{CD}



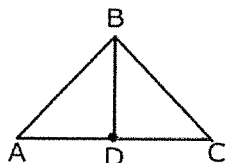
b) \overline{CD} bisects \overline{AB} at E



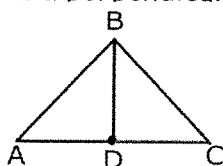
c) \overline{AB} and \overline{CD} bisect each other at E



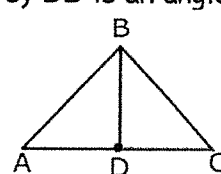
d) \overline{DB} is a median



e) \overline{DB} is a perpendicular bisector



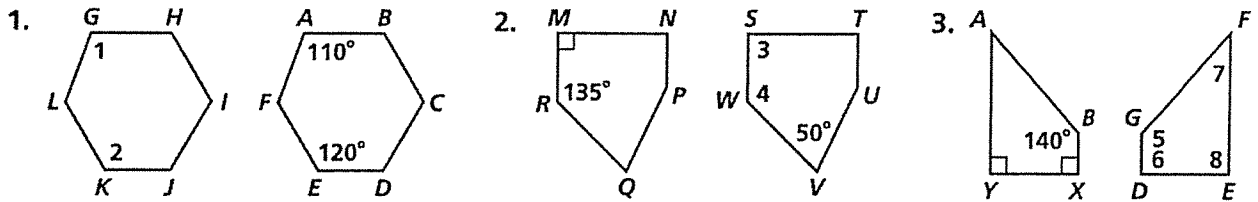
e) \overline{DB} is an angle bisector



Practice 4-1

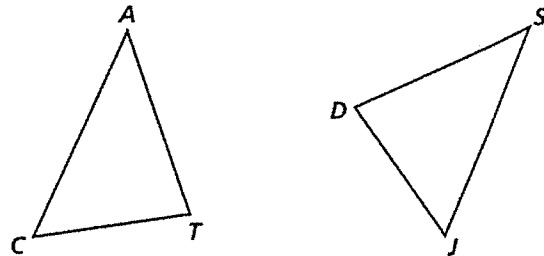
Congruent Figures

Each pair of polygons is congruent. Find the measures of the numbered angles.



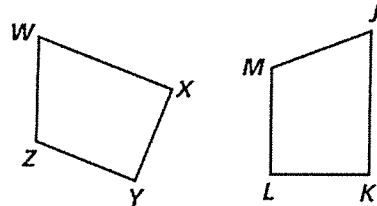
$\triangle CAT \cong \triangle JSD$. List each of the following.

4. three pairs of congruent sides
5. three pairs of congruent angles



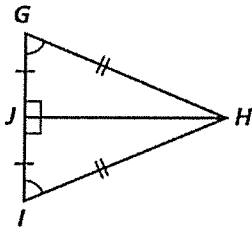
$WXYZ \cong JKLM$. List each of the following.

6. four pairs of congruent sides
7. four pairs of congruent angles

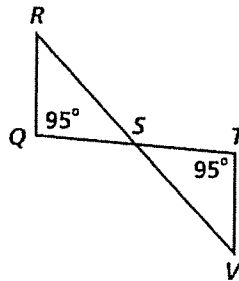


State whether the pairs of figures are congruent. Explain.

8. $\triangle GHJ$ and $\triangle IHJ$



9. $\triangle QRS$ and $\triangle TVS$



10. **Developing Proof** Use the information given in the diagram. Give a reason that each statement is true.

- a. $\angle L \cong \angle Q$
- b. $\angle LNM \cong \angle PNQ$
- c. $\angle M \cong \angle P$
- d. $\overline{LM} \cong \overline{QP}$, $\overline{LN} \cong \overline{QN}$, $\overline{MN} \cong \overline{PN}$
- e. $\triangle LNM \cong \triangle QNP$

