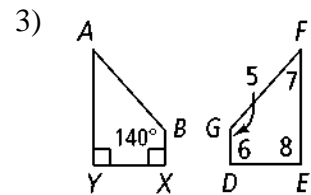
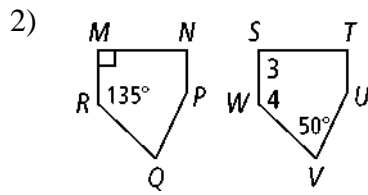
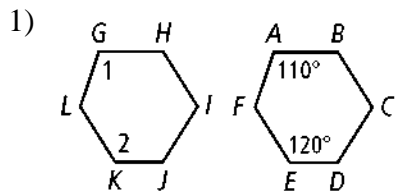


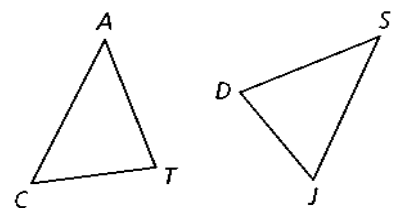
4.2 – Congruent Figures

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



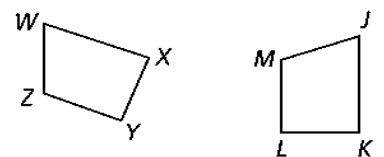
$\triangle CAT \cong \triangle JSD$. List each of the following.

- 4) Three pairs of congruent sides 5) Three pairs of congruent angles



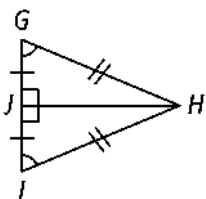
$WXYZ \cong JKLM$. List each of the following.

- 6) Four pairs of congruent sides 7) Four pairs of congruent angles

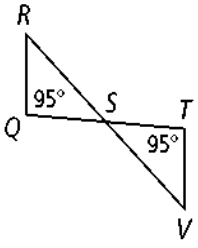


For #8-10, can you conclude that the triangles are congruent? Justify your answers.

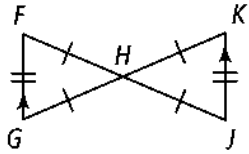
- 8) $\triangle GHJ$ and $\triangle IHJ$



9) $\triangle QRS$ and $\triangle TVS$

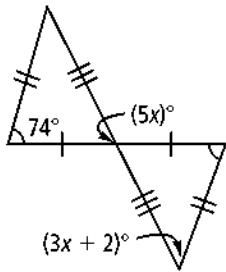


10) $\triangle FGH$ and $\triangle JKH$

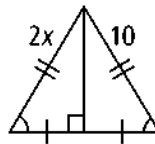


Find the values of the variables.

11)



12)

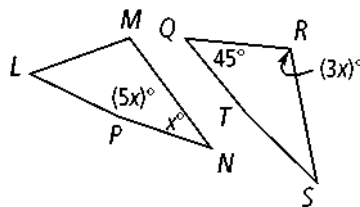


$ABCD \cong FGHI$. Find the measures of the given angles or lengths of the given sides.

13) $m\angle C = 5z + 20$, $m\angle H = 6z + 10$

14) $AD = 5b + 4$; $FJ = 3b + 8$

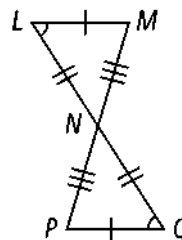
15) $LMNP \cong QRST$. Find the value of x .



Complete the following proof.

16) Given: (All information from the diagram)

Prove: $\triangle LNM \cong \triangle QNP$



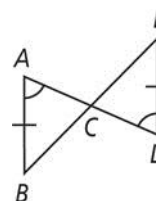
Statement

Reasons

1. $\angle L \cong \angle Q$
2. $\angle LNM \cong \angle QNP$
3. $\angle M \cong \angle P$
4. $\overline{LM} \cong \overline{QP}, \overline{LN} \cong \overline{QN}, \overline{MN} \cong \overline{PN}$
5. $\triangle LNM \cong \triangle QNP$

17) Given: \overline{AD} and \overline{BE} bisect each other.
 $\overline{AB} \cong \overline{DE}; \angle A \cong \angle D$

Prove: $\triangle ACB \cong \triangle DCE$



Statement

Reasons

1. \overline{AD} and \overline{BE} bisect each other.
 $\overline{AB} \cong \overline{DE}, \angle A \cong \angle D$
2. $\overline{AC} \cong \overline{CD}, \overline{BC} \cong \overline{CE}$
3. $\angle ACB \cong \angle DCE$
4. $\angle B \cong \angle E$
5. $\triangle ACB \cong \triangle DCE$
