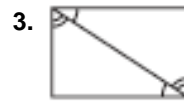
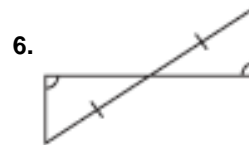
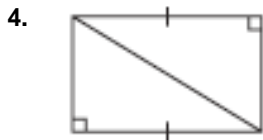


State the postulate or theorem you would use to prove each pair of triangles congruent. If the triangles cannot be proven congruent, write *none*.



1. \_\_\_\_\_



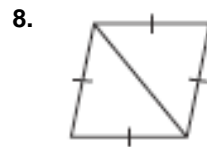
2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_



7. \_\_\_\_\_

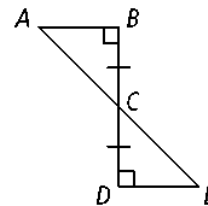
8. \_\_\_\_\_

9. \_\_\_\_\_

10. Complete the proof.

**Given:**  $\overline{BD} \perp \overline{AB}$ ,  $\overline{BD} \perp \overline{DE}$ ,  
 $\overline{BC} \cong \overline{DC}$

**Prove:**  $\triangle ABC \cong \triangle EDC$



**Statements**

**Reasons**

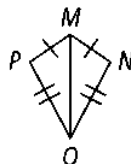
- 1)  $\overline{BD} \perp \overline{AB}$ ,  $\overline{BD} \perp \overline{DE}$
- 2)  $\angle CDE$  and  $\angle CBA$  are right angles.
- 3)  $\angle CDE \cong \angle CBA$
- 4)
- 5)  $\overline{BC} \cong \overline{DC}$
- 6)  $\triangle ABC \cong \triangle EDC$

- 1) Given
- 2) Definition of perpendicular lines
- 3)
- 4) Vertical angles are congruent.
- 5)
- 6)

11. Write a two-column proof.

**Given:**  $\overline{MN} \cong \overline{MP}$ ,  $\overline{NO} \cong \overline{PO}$

**Prove:**  $\triangle MPO \cong \triangle MNO$



**Statements**

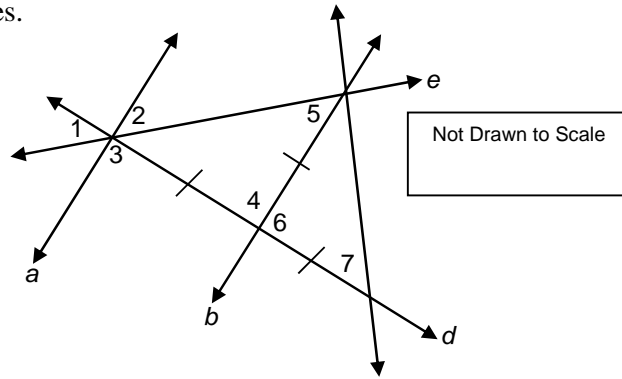
**Reasons**

- 1)  $\overline{MN} \cong \overline{MP}$ ,  $\overline{NO} \cong \overline{PO}$
- 2)
- 3)

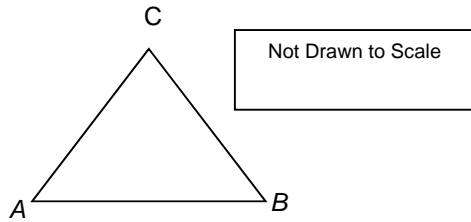
- 1) Given
- 2)
- 3)

12. Find all of the numbered angles.

Given:  $a \parallel b$ ;  $m\angle 5 = 70^\circ$

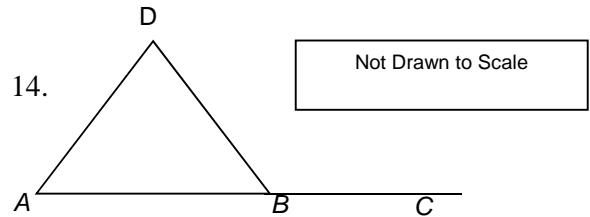


13.



Given:  $\overline{AC} \cong \overline{BC}$   
 $m\angle B = 53^\circ$   
 Find  $m\angle C$

14.



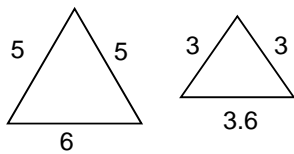
Given:  $\overline{AD} \cong \overline{BD}$   
 and  $m\angle DBC = 120^\circ$   
 Find  $m\angle A$

15. Are the following figures similar? Answer yes or no.

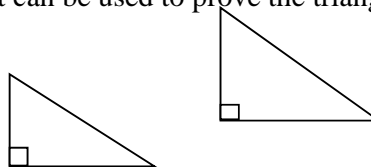
If yes, state the postulate or theorem that can be used to prove the triangles are similar.

(Not drawn to scale.)

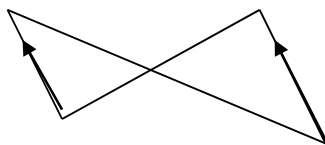
a.



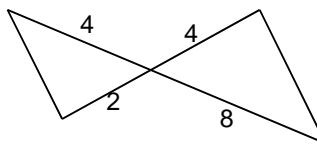
b.



c.



d.



16. Find  $x$ .

