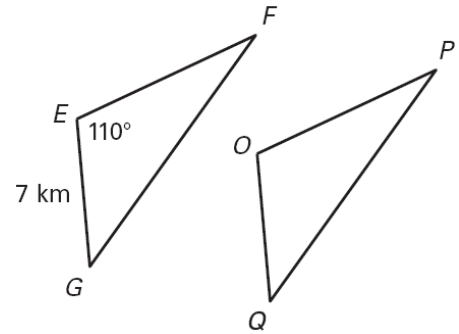


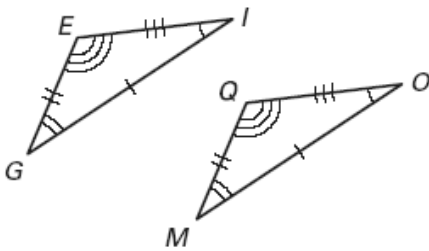
In the diagram, $\triangle EFG \cong \triangle OPQ$. Complete the statement.

1. $\overline{EF} \cong \underline{\hspace{1cm} ? \hspace{1cm}}$
2. $\angle P \cong \underline{\hspace{1cm} ? \hspace{1cm}}$
3. $\angle G \cong \underline{\hspace{1cm} ? \hspace{1cm}}$
4. $m\angle O = \underline{\hspace{1cm} ? \hspace{1cm}}$
5. $\overline{OQ} = \underline{\hspace{1cm} ? \hspace{1cm}}$
6. $\triangle GFE \cong \underline{\hspace{1cm} ? \hspace{1cm}}$

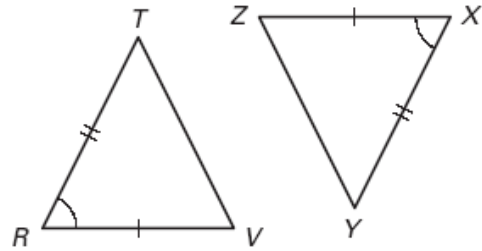


Write a congruence statement for any figures that can be proved congruent. Explain your reasoning.

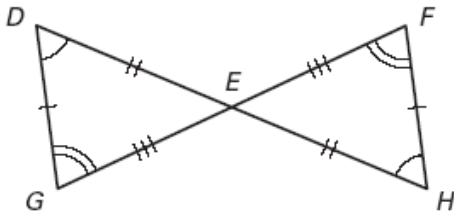
7.



8.

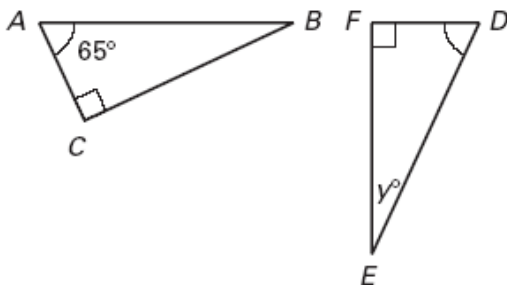


9.

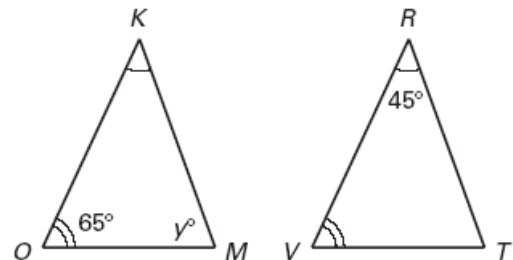


Find the value of y .

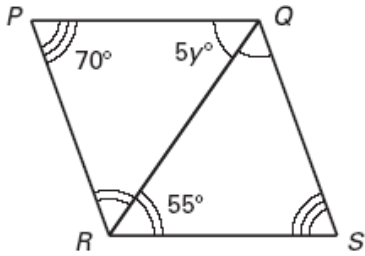
10.



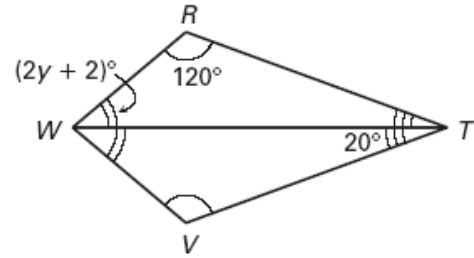
11.



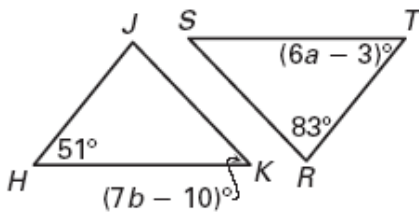
12.



13.



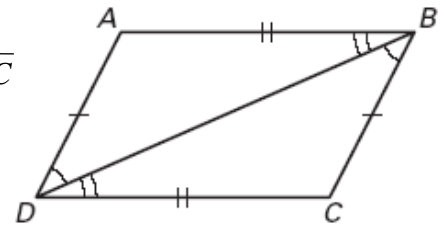
14. Given $\triangle HJK \cong \triangle TRS$, find the values of a and b .



15. **Proof** Complete the proof.

GIVEN: $\angle ABD \cong \angle CDB$, $\angle ADB \cong \angle CBD$, $\overline{AD} \cong \overline{BC}$, $\overline{AB} \cong \overline{DC}$

PROVE: $\triangle ABD \cong \triangle CDB$



Statements

1. $\angle ABD \cong \angle CDB$, $\angle ADB \cong \angle CBD$,
 $\overline{AD} \cong \overline{BC}$, $\overline{AB} \cong \overline{DC}$

2. $\overline{BD} \cong \overline{BD}$

3. $\underline{\hspace{1cm}}$

4. $\triangle ABD \cong \triangle CDB$

Reasons

1. Given

2. $\underline{\hspace{1cm}}$

3. Third Angles Theorem

4. $\underline{\hspace{1cm}}$

Answer Key

1. \overline{OP}
2. $\angle F$
3. $\angle Q$
4. 110°
5. 7 km
6. $\triangle QPO$
7. $\triangle EIG \cong \triangle QOM$; all corresponding sides and angles are congruent.
8. none
9. $\triangle DEG \cong \triangle HEF$; all corresponding sides and angles are congruent.
10. 25
11. 70
12. 11
13. 19
14. $a = 9$, $b = 8$
15. 2) Reflexive Property, 3) $\angle A \cong \angle C$ 4) All corresponding sides and angles are congruent