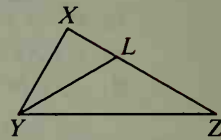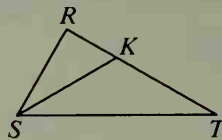**Write proofs in the form specified by your teacher (two-column form, paragraph form, or a list of key steps).**

9. Given: $\triangle RST \cong \triangle XYZ$;
   $\overrightarrow{SK}$ bisects $\angle RST$;
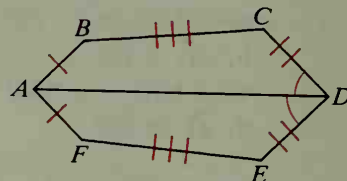 $\overrightarrow{YL}$ bisects $\angle XYZ$.
   Prove: $\overline{SK} \cong \overline{YL}$

10. Given: Congruent parts as marked in the diagram.
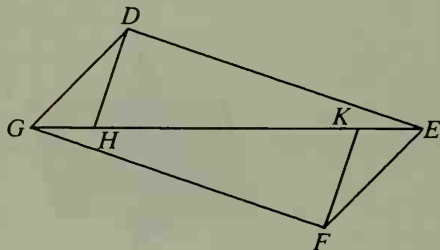   Prove: $\angle B \cong \angle F$
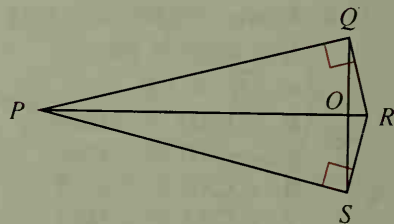   (*Hint*: First draw two auxiliary lines.)

11. Given: $\overline{DE} \cong \overline{FG}$; $\overline{GD} \cong \overline{EF}$;
    $\angle HDE$ and $\angle KFG$ are rt. $\triangle$.
    Prove: $\overline{DH} \cong \overline{FK}$

12. Given: $\overline{PQ} \perp \overline{QR}$;
    $\overline{PS} \perp \overline{SR}$;
    $\overline{PQ} \cong \overline{PS}$
    Prove: O is the midpoint of $\overline{QS}$.

13. Draw two line segments, $\overline{KL}$ and $\overline{MN}$, that bisect each other at O. Mark a point P on $\overline{KN}$ and let Q be the point where $\overrightarrow{PO}$ intersects $\overline{ML}$. Prove that O is the midpoint of $\overline{PQ}$. (First state what is given and what is to be proved.)

14. This figure is like the one that Euclid used to prove that the base angles of an isosceles triangle are congruent (our Theorem 4-1). Write a paragraph proof following the key steps shown below.

    Given: $\overline{AB} \cong \overline{AC}$;
    $\overline{AB}$ and $\overline{AC}$ are extended so $\overline{BD} \cong \overline{CE}$.
    Prove: $\angle ABC \cong \angle ACB$

    Key steps of proof:
    1. $\triangle DAC \cong \triangle EAB$
    2. $\triangle DBC \cong \triangle ECB$
    3. $\angle DBC \cong \angle ECB$
    4. $\angle ABC \cong \angle ACB$