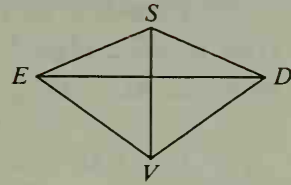**18. Given:** *S* is equidistant from *E* and *D*;
        V is equidistant from *E* and *D*.
    Prove: $\overleftrightarrow{SV}$ is the perpendicular bisector of $\overline{ED}$.

19. a. A town wants to build a beach house on the lake front equidistant from the recreation center and the school. Copy the diagram and show the point *B* where the beach house should be located.
    b. The town also wants to build a boat-launching site that is equidistant from Elm Road and Main Street. Find the point *L* where it should be built.
    c. On your diagram, locate the spot *F* for a flagpole that is to be the same distance from the recreation center, the school, and the courthouse.
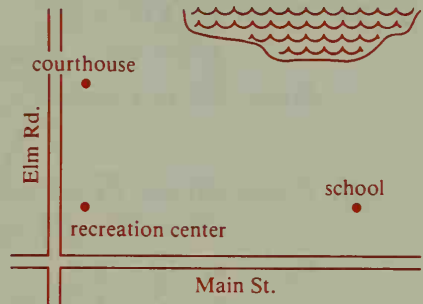
20. Given: $\triangle LMN \cong \triangle RST$;
        $\overline{LX}$ and $\overline{RY}$ are altitudes.
    Prove: $\overline{LX} \cong \overline{RY}$
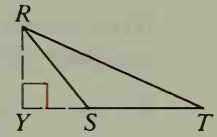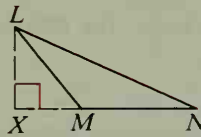
21. a. Given: $\overline{AB} \cong \overline{AC}$; $\overline{BD} \perp \overline{AC}$; $\overline{CE} \perp \overline{AB}$
      Prove: $\overline{BD} \cong \overline{CE}$
    b. The result you proved in part (a) can be stated as a theorem about certain altitudes. State this theorem in your own words.
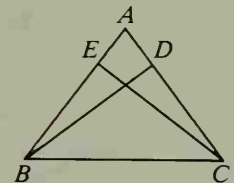
22. Prove that the medians drawn to the legs of an isosceles triangle are congruent. Write the proof in two-column form.

For Exercises 23–27 write proofs in paragraph form. (*Hint*: You can use theorems from this section to write fairly short proofs for Exercises 23 and 24.)

23. Given: $\overleftrightarrow{SR}$ is the $\perp$ bisector of $\overline{QT}$;
        $\overleftrightarrow{QR}$ is the $\perp$ bisector of $\overline{SP}$.
    Prove: $PQ = TS$
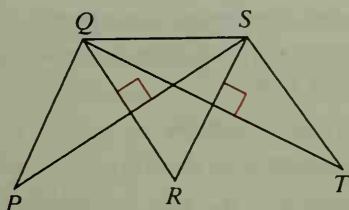
24. Given: $\overrightarrow{DP}$ bisects $\angle ADE$;
        $\overrightarrow{EP}$ bisects $\angle DEC$.
    Prove: $\overrightarrow{BP}$ bisects $\angle ABC$.