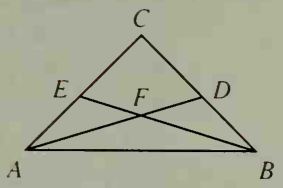
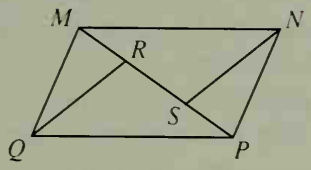
Self-Test 3

1. Suppose you wish to prove $\triangle AFE \cong \triangle BFD$. If you have already proved $\triangle ABE \cong \triangle BAD$, what corresponding parts from this second pair of congruent triangles would you use to prove the first pair of triangles congruent?



2. Given: $\triangle MPQ \cong \triangle PMN$; $\overline{MS} \cong \overline{PR}$

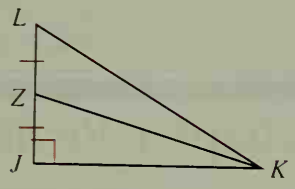
Prove: $\triangle MSN \cong \triangle PRQ$



3. In $\triangle JKL$ name each of the following.

a. an altitude **b.** a median

4. Note that $ZL = ZJ$. Can you deduce that $\overrightarrow{KZ}$ bisects $\angle LKJ$?



5. $\overrightarrow{UV}$ bisects $\angle WUX$. Write the theorem that justifies the statement that V is equidistant from $\overrightarrow{UW}$ and $\overrightarrow{UX}$.

6. In $\triangle ABC$, $AB = 7$ and $BC = 7$. Write the theorem that allows you to conclude that B is on the perpendicular bisector of $\overline{AC}$.

Chapter Summary

1. Congruent figures have the same size and shape. Two triangles are congruent if their corresponding sides and angles are congruent.

2. We have five ways to prove two triangles congruent:

SSS SAS ASA AAS HL (rt. △)

3. A common way to prove that two segments or two angles are congruent is to show that they are corresponding parts of congruent triangles.

4. A line and plane are perpendicular if and only if they intersect and the line is perpendicular to all lines in the plane that pass through the point of intersection.

5. If two sides of a triangle are congruent, then the angles opposite those sides are congruent. An equilateral triangle is also equiangular, with three 60° angles.