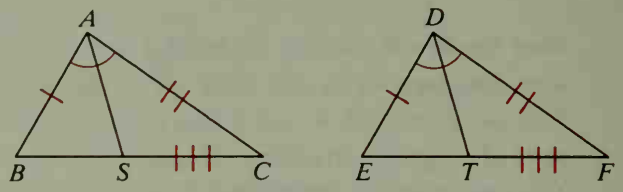
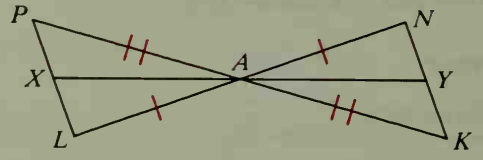
Classroom Exercises

In Exercises 1–3 you are given a diagram that is marked with given information. Give the reason for each key step of the proof.

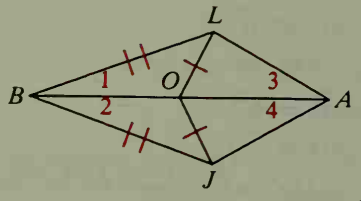
1. Prove: $\overline{AS} \cong \overline{DT}$
   Key steps of proof:
   a. $\triangle ABC \cong \triangle DEF$
   b. $\angle C \cong \angle F$
   c. $\triangle ACS \cong \triangle DFT$
   d. $\overline{AS} \cong \overline{DT}$



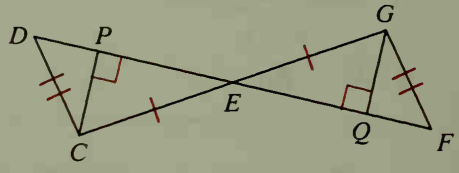
2. Prove: $\overline{AX} \cong \overline{AY}$
   Key steps of proof:
   a. $\triangle PAL \cong \triangle KAN$
   b. $\angle L \cong \angle N$
   c. $\triangle LAX \cong \triangle NAY$
   d. $\overline{AX} \cong \overline{AY}$



3. Prove: $\angle 3 \cong \angle 4$
   Key steps of proof:
   a. $\triangle LOB \cong \triangle JOB$
   b. $\angle 1 \cong \angle 2$
   c. $\triangle LBA \cong \triangle JBA$
   d. $\angle 3 \cong \angle 4$



4. Suggest a plan for proving that $\angle D \cong \angle F$.

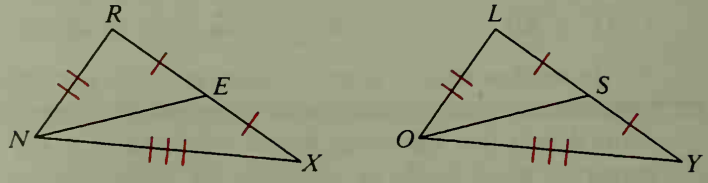


Written Exercises

In Exercises 1–6 you are given a diagram that is marked with given information. Give the reason for each key step of the proof.

A

1. Prove: $\overline{NE} \cong \overline{OS}$
   Key steps of proof:
   a. $\triangle RNX \cong \triangle LOY$
   b. $\angle X \cong \angle Y$
   c. $\triangle NEX \cong \triangle OSY$
   d. $\overline{NE} \cong \overline{OS}$



2. Prove: $\overline{BE} \cong \overline{DF}$
   Key steps of proof:
   a. $\triangle ABC \cong \triangle CDA$
   b. $\angle 1 \cong \angle 2$
   c. $\triangle ABE \cong \triangle CDF$
   d. $\overline{BE} \cong \overline{DF}$