

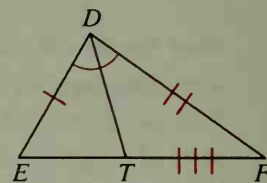
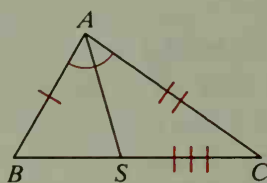
Classroom Exercises

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:

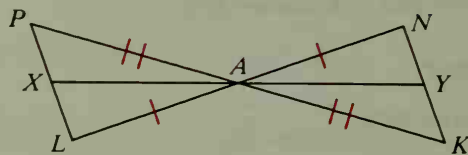
- $\triangle ABC \cong \triangle DEF$
- $\angle C \cong \angle F$
- $\triangle ACS \cong \triangle DFT$
- $\overline{AS} \cong \overline{DT}$



2. Prove: $\overline{AX} \cong \overline{AY}$

Key steps of proof:

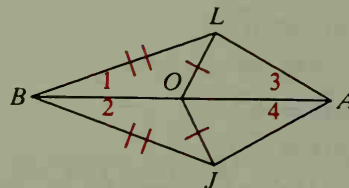
- $\triangle PAL \cong \triangle KAN$
- $\angle L \cong \angle N$
- $\triangle LAX \cong \triangle NAY$
- $\overline{AX} \cong \overline{AY}$



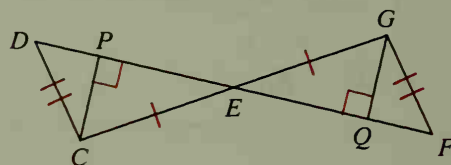
3. Prove: $\angle 3 \cong \angle 4$

Key steps of proof:

- $\triangle LOB \cong \triangle JOA$
- $\angle 1 \cong \angle 2$
- $\triangle LBA \cong \triangle JBA$
- $\angle 3 \cong \angle 4$



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



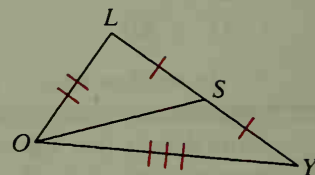
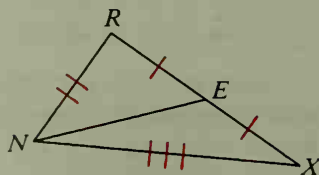
Written Exercises

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:

- $\triangle RNX \cong \triangle LOY$
- $\angle X \cong \angle Y$
- $\triangle NEX \cong \triangle OSY$
- $\overline{NE} \cong \overline{OS}$



2. Prove: $\overline{BE} \cong \overline{DF}$

Key steps of proof:

- $\triangle ABC \cong \triangle CDA$
- $\angle 1 \cong \angle 2$
- $\triangle ABE \cong \triangle CDF$
- $\overline{BE} \cong \overline{DF}$

