Def. Proof

A logical step by step argument in which statement made is supported by statement that is accepted as true.

1. **Given Information**
2. **Algebraic Properties**
3. **Definitions**
4. **Postulates**
5. **Theorems**
6. **Corollaries**

Algebraic Properties

Addition Property

Subtraction Property

Multiplication Property

Division Property

Substitution Property

Th. 2.1 The Midpt. Theorem

If M if the midpt. of $\overline{AB}$, then $\overline{AM} \cong \overline{MB}$

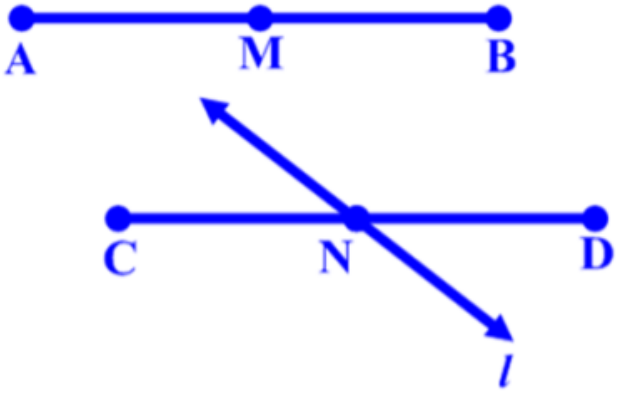
Example 1: **Write a paragraph proof.**

Given: $\overline{AB} \cong \overline{CD}$

M is the midpt. of AB

Line *l* bisects CD at pt. N

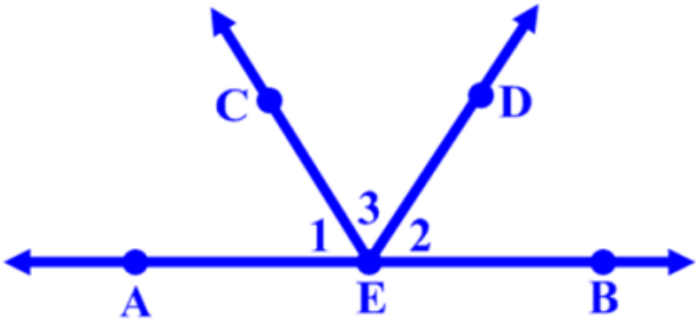
Prove: $\overline{AM} \cong \overline{ND}$



Example 2: **Write a paragraph proof.**

Given: $\overrightarrow{EC}$ bisects $\angle AED$
$\overrightarrow{ED}$ bisects $\angle CEB$

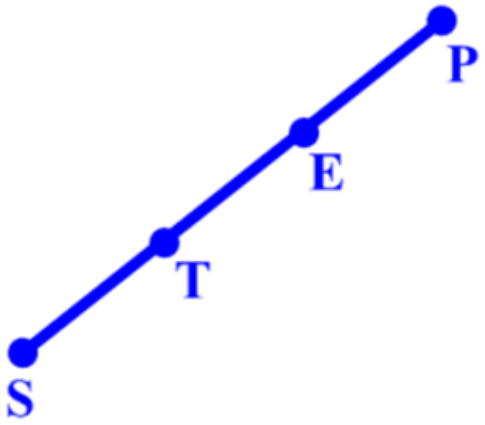
Prove: $\angle 1 \cong \angle 2$



Write a paragraph proof.

Given: T is the midpt. of $\overline{SE}$
E is the midpt. of $\overline{TP}$

Prove: $\overline{ST} \cong \overline{EP}$



Write a paragraph proof.

Given: $\angle AEC \cong \angle BED$

Prove: $\angle 1 \cong \angle 2$