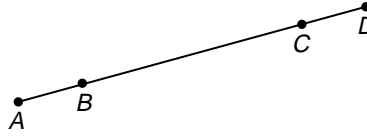


Practice

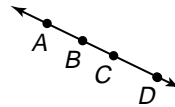
Verifying Segment Relationships

Complete each proof.

1. **Given:** $\overline{AD} = 2\overline{AB} + \overline{BC}$ **Prove:** $\overline{AB} \cong \overline{CD}$ **Proof:****Statements****Reasons**

- a. $\overline{AD} = 2\overline{AB} + \overline{BC}$
 b. $\overline{AD} = \overline{AB} + \overline{BC} + \overline{CD}$
 c. $2\overline{AB} + \overline{BC} = \overline{AB} + \overline{BC} + \overline{CD}$
 d. $\overline{AB} = \overline{CD}$
 e. $\overline{AB} \cong \overline{CD}$

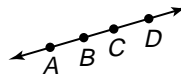
- a. _____
 b. _____
 c. _____
 d. _____
 e. _____

2. **Given:** B is between A and D . C is between A and D .**Prove:** $\overline{AB} + \overline{BD} = \overline{AC} + \overline{CD}$ **Proof:****Statements****Reasons**

- a. B is between A and D .
 C is between A and D .
 b. $\overline{AB} + \overline{BD} = \overline{AD}$
 c. $\overline{AC} + \overline{CD} = \overline{AD}$
 d. $\overline{AB} + \overline{BD} = \overline{AC} + \overline{CD}$
 e. $\overline{AB} + \overline{BD} = \overline{AC} + \overline{CD}$

- a. _____
 b. _____
 c. _____
 d. _____
 e. _____

Write a two-column proof.

3. **Given:** B is the midpoint of \overline{AC} .**Prove:** $\overline{AB} + \overline{CD} = \overline{BD}$ **Proof:****Statements****Reasons**