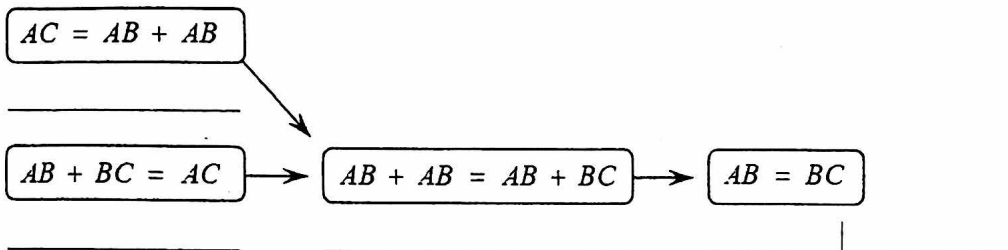
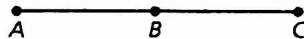


HW #2-8

1. Match each reason with the correct step in the flow chart.

Given $AC = AB + AB$

Prove $AB = BC$

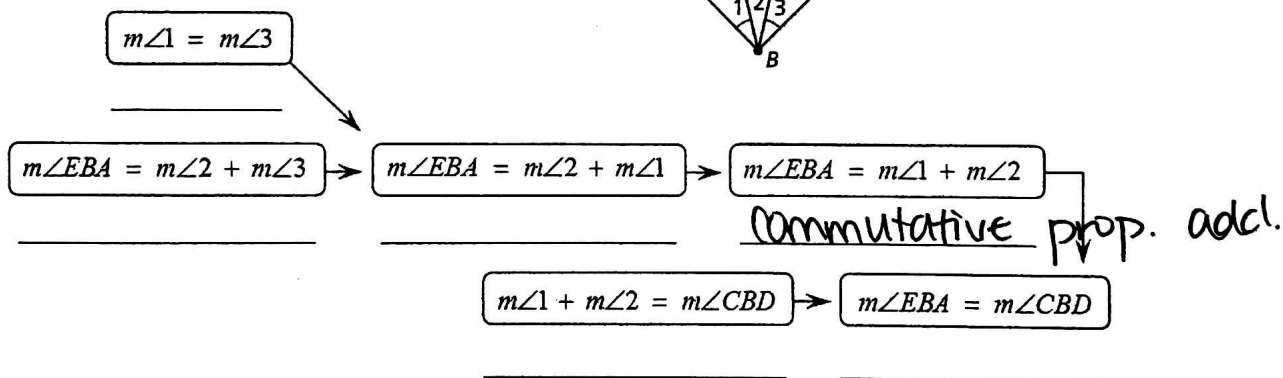
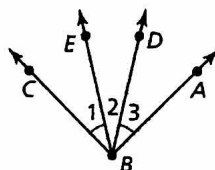


- A. Segment Addition Postulate (Post. 1.2) B. Given
C. Transitive Property of Equality D. Subtraction Property of Equality

2. Fill in the reasons in the flow chart.

Given $m\angle 1 = m\angle 3$

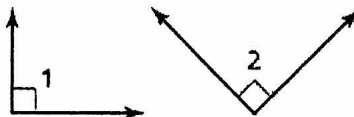
Prove $m\angle EBA = m\angle CBD$



3. Finish the two-column proof. Make sure every statement is paired with a reason.

Given $\angle 1$ and $\angle 2$ are right angles.

Prove $\angle 1 \cong \angle 2$



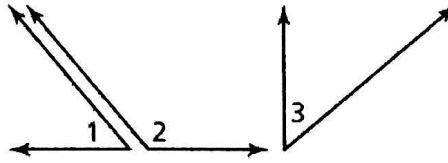
Flowchart Proof

Statements	Reasons
1. $\angle 1$ and $\angle 2$ are right angles	1.
2.	2. Definition of a right angle ($rt. \angle \leftrightarrow 90^\circ$)
3.	3. Trans. Prop. =
4. $\angle 1 \cong \angle 2$	4.

4. Finish the two-column proof. Make sure every statement is paired with a reason.
 supplementary to the same angle are congruent.

Given $\angle 1$ and $\angle 2$ are supplementary.
 $\angle 3$ and $\angle 2$ are supplementary.

Prove $\angle 1 \cong \angle 3$

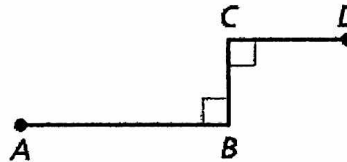


Statements	Reasons
1. $\angle 1$ supp $\angle 2$ and $\angle 3$ supp $\angle 2$	1. Given
2.	2.
3.	3.
4.	4. Subtr. Prop. =
5. $\angle 1 \cong \angle 3$	5.

5. Finish the two-column proof. Make sure every statement is paired with a reason.
 Then write a two-column proof.

Given $\overline{AB} \perp \overline{BC}$, $\overline{DC} \perp \overline{BC}$

Prove $\angle B \cong \angle C$



Statements	Reasons
1. $\overline{AB} \perp \overline{BC}$ and $\overline{DC} \perp \overline{BC}$	1. Given
2.	2. Definition of Perp. Lines ($\perp \leftrightarrow \text{vt. } \angle$)
3.	3. Definition of a right angle ($\text{vt. } \angle \leftrightarrow 90^\circ$)
4.	4.
5. $\angle B \cong \angle C$	5.