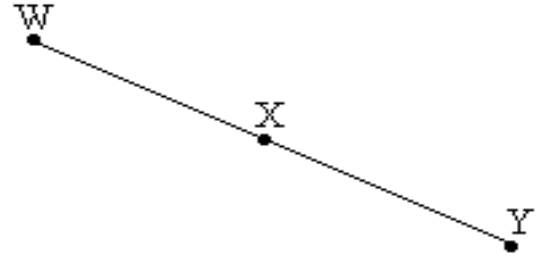


NAME: \_\_\_\_\_

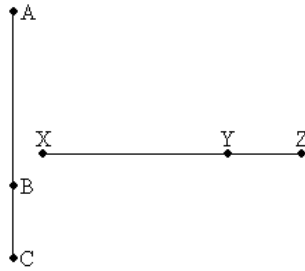
**Given:**  $WX = XY$ **Prove:**  $WY = 2XY$ 

Statements	Reasons
1. $WX = XY$	1.
2. $WY = WX + XY$	2.
3. $WY = XY + XY$	3.
4. $WY = 2XY$	4.

**Rearrange the scrambled reasons and write them in the appropriate spots in the two-column proof above.**

Scrambled Reasons
Simplify
Given
Substitution Property
Segment Addition Postulate

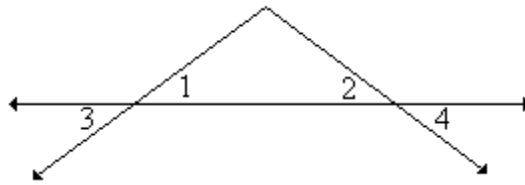
**Given:**  $\overline{AB} \cong \overline{XY}$   
 $\overline{BC} \cong \overline{YZ}$   
**Prove:**  $\overline{AC} \cong \overline{XZ}$



Statements	Reasons
1. $\overline{AB} \cong \overline{XY}, \overline{BC} \cong \overline{YZ}$	1.
2. $AB = XY, BC = YZ$	2.
3. $AB + BC = XY + BC$	3.
4. $AB + BC = XY + YZ$	4.
5. $AB + BC = AC$ $XY + YZ = XZ$	5.
6. $AC = XY + YZ$	6.
7. $AC = XZ$	7.
8. $\overline{AC} \cong \overline{XZ}$	8.

Scrambled Reasons	
Definition of $\cong$ Segments	Substitution Property (=)
Definition of $\cong$ Segments	Segment Addition Postulate
Given	Addition Property (=)
Substitution Property (=)	Substitution Property (=)

**Given:**  $\angle 1 \cong \angle 2$



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

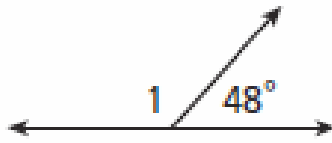
Statements	Reasons
1.	1.
2. $m\angle 1 = m\angle 2$	2.
3. $\angle 1 \cong \angle 3, \angle 2 \cong \angle 4$	3.
4. $m\angle 1 = m\angle 3, m\angle 2 = m\angle 4$	4.
5. $m\angle 1 = m\angle 4$	5.
6. $m\angle 3 = m\angle 4$	6.
7.	7.

Rearrange the scrambled reasons and write them in the appropriate spots in the two-column proof above.

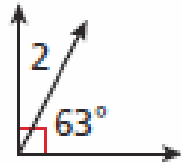
<b>Scrambled Reasons</b>
Definition of $\cong$ Angles
Definition of $\cong$ Angles
Definition of $\cong$ Angles
Substitution Property (=)
Transitive Property (=)
Vertical Angles are $\cong$ .
Given

Find each angle measure.

4.  $m\angle 1$



5.  $m\angle 2$



Identify the property that justifies each statement.

6.  $\overline{JK} \cong \overline{KL}$ , so  $\overline{KL} \cong \overline{JK}$ .

7. If  $m = n$  and  $n = p$ , then  $m = p$ .

8.  $a + b = a + b$