
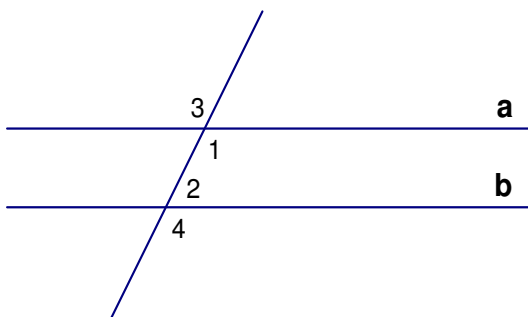


Properties

State the property, theorem, postulate or definition used to make the conclusion.

1. If $UV = VW$, then $VW = UV$. _____
2. If $\angle Q$ is a right angle, then $m\angle Q$ is 90° . _____
3. $2(x - 50) = 2x - 100$ _____
4.  $AB + BC = AC$ _____
5. If $\angle 1 \cong \angle 2$, then $m\angle 1 = m\angle 2$. _____
6. $\angle A \cong \angle A$. _____
7. If $2x + 4 = 17$, then $2x = 13$. _____
8. T is the midpoint of \overline{SR} , then $\overline{ST} \cong \overline{TR}$. _____
9. If $\angle 1 \cong \angle 2$ and $\angle 2 \cong \angle 3$, then $\angle 1 \cong \angle 3$. _____
10. If $\angle 3$ and $\angle 4$ are a linear pair, then they are supplementary. _____
11. If \overline{AB} bisects $\angle CAD$, then $\angle BAC \cong \angle DAB$. _____
12. If $\angle 4$ and $\angle 5$ are supplementary, then $m\angle 4 + m\angle 5 = 180$. _____


Use the diagram below for 13 – 14.



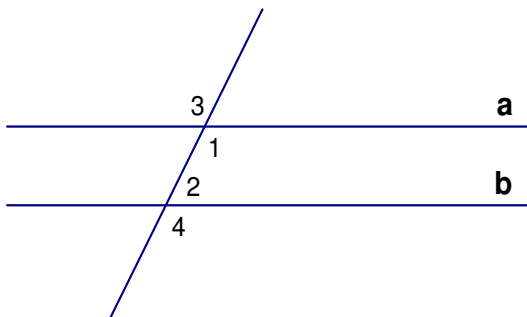
13. If $a \parallel b$, then $m\angle 1 + m\angle 2 = 180$. _____
14. $\angle 3 \cong \angle 4$, then $a \parallel b$ _____

Properties

State the property, theorem, postulate or definition used to make the conclusion.

1. If $UV = VW$, then $VW = UV$. **Symmetric Property of Equality**
2. If $\angle Q$ is a right angle, then $m\angle Q$ is 90° . **Def of a Right Angle**
3. $2(x - 50) = 2x - 100$ **Distributive Property of Equality**
4.  **Segment Addition Postulate**
5. If $\angle 1 \cong \angle 2$, then $m\angle 1 = m\angle 2$. **Def of Congruent Angles**
6. $\angle A \cong \angle A$. **Reflexive Property of Angle Congruence**
7. If $2x + 4 = 17$, then $2x = 13$. **Subtraction Property of Equality**
8. T is the midpoint of \overline{SR} , then $\overline{ST} \cong \overline{TR}$. **Def of Midpoint**
9. If $\angle 1 \cong \angle 2$ and $\angle 2 \cong \angle 3$, then $\angle 1 \cong \angle 3$. **Transitive Property of Angle Congruence**
10. If $\angle 3$ and $\angle 4$ are a linear pair, then they are supplementary. **Linear Pair Postulate**
11. If \overline{AB} bisects $\angle CAD$, then $\angle BAC \cong \angle DAB$. **Def of Angle Bisector**
12. If $\angle 4$ and $\angle 5$ are supplementary, then $m\angle 4 + m\angle 5 = 180$. **Def of Supplementary Angles**

Use the diagram below for 13 – 14.



13. If $a \parallel b$, then $m\angle 1 + m\angle 2 = 180$. **Consecutive Interior Angles Theorem**
14. $\angle 3 \cong \angle 4$, then $a \parallel b$ **Alt Ext Angles Converse**