

2.5 Properties + Equation Proofs

Name _____

State the property that justifies each statement.

1. If $m\angle 1 = m\angle 2$, then $m\angle 2 = m\angle 1$.
2. If $m\angle 1 = 90$ and $m\angle 2 = m\angle 1$, then $m\angle 2 = 90$.
3. If $AB = RS$ and $RS = WY$, then $AB = WY$.
4. If $AB = CD$, then $\frac{1}{2}AB = \frac{1}{2}CD$.
5. If $m\angle 1 + m\angle 2 = 110$ and $m\angle 2 = m\angle 3$, then $m\angle 1 + m\angle 3 = 110$.
6. $RS = RS$
7. If $AB = RS$ and $TU = WY$, then $AB + TU = RS + WY$.
8. If $m\angle 1 = m\angle 2$ and $m\angle 2 = m\angle 3$, then $m\angle 1 = m\angle 3$.

Write a 2-column proof.

9. Given: $4x + 8 = x + 2$

Prove: $x = -2$

10. Given: $\frac{4x + 6}{2} = 9$

Prove: $x = 3$

11. Given: $6x + 2(x-1) = 30$
Prove: $x = 4$

12. Given: $8x - 5 = 2x + 1$
Prove: $1 = x$