

Name _____

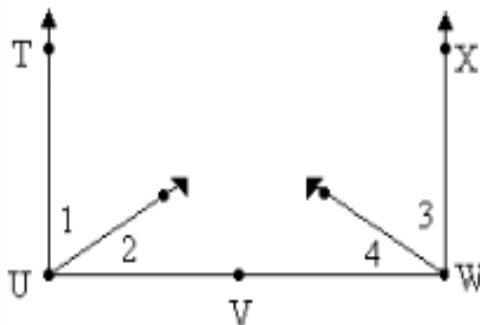
MORE GEOMETRIC PROOFS PRACTICE

$$m\angle TUV = 90^\circ$$

Given: $m\angle XWV = 90^\circ$

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

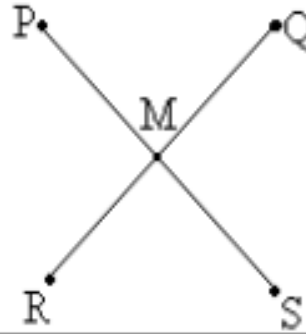
Prove: $m\angle 2 = m\angle 4$



| Statements | Reasons |
|---|----------|
| 1. | 1. Given |
| 2. $m\angle TUV = m\angle XWV$ | 2. |
| 3. $m\angle TUV = m\angle 1 + m\angle 2$ $m\angle XWV = m\angle 3 + m\angle 4$ | 3. |
| 4. $m\angle 1 + m\angle 2 = m\angle 3 + m\angle 4$ | 4. |
| 5. $m\angle 1 + m\angle 2 = m\angle 1 + m\angle 4$ | 5. |
| 6. $m\angle 2 = m\angle 4$ | 6. |

| Scrambled Reasons |
|--------------------------------|
| Substitution Property |
| Substitution Property |
| Subtraction Property |
| Right Angle Congruence Theorem |
| Angle Addition Postulate |

Given: $\overline{PS} \cong \overline{RQ}$
 M is the midpoint of \overline{PS} .
 M is the midpoint of \overline{RQ} .



Prove: $\overline{PM} \cong \overline{RM}$

| Statements | Reasons |
|--|----------|
| 1. | 1. Given |
| 2. $PS = RQ$ | 2. |
| 3. $PM = MS, RM = MQ$ | 3. |
| 4. $PS = PM + MS$ $RQ = RM + MQ$ | 4. |
| 5. $PM + MS = RM + MQ$ | 5. |
| 6. $PM + PM = RM + RM$ | 6. |
| 7. $2PM = 2RM$ | 7. |
| 8. $PM = RM$ | 8. |
| 9. $\overline{PM} \cong \overline{RM}$ | 9. |

Scrambled Reasons

Definition of \cong Segments

Definition of \cong Segments

Substitution Property

Substitution Property

Simplify

Definition of Midpoint

Division Property

Segment Addition Postulate