Practice 2-4

Reasoning in Algebra

Use the given property to complete each statement.

1. Symmetric Property of Equality

If
$$MN = UT$$
, then ______.

2. Addition Property of Equality

If
$$y - 15 = 36$$
, then _____

3. Reflexive Property of Congruence

$$\overline{JL}\cong$$
 ______.

Give a reason for each step.

4. 0.25x + 2x + 12 = 39

$$2.25x + 12 = 39$$

$$2.25x = 27$$

$$225x = 2700$$

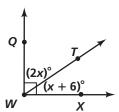
$$x = 12$$

Name the property that justifies each statement.

- **5.** If $m \angle G = 35$ and $m \angle S = 35$, then $m \angle G = m \angle S$.
- **6.** If 10x + 6y = 14 and x = 2y, then 10(2y) + 6y = 14.
- **7.** If $\overline{JK} \cong \overline{LM}$, then $\overline{LM} \cong \overline{JK}$.

Fill in the missing information. Solve for x, and justify each step.

8.



$$m \angle QWT + m \angle TWX = 90$$

$$2x + (x + 6) =$$

 $_{---}$ + 6 = 90

$$x =$$