

8. $\overline{VU} \cong \overline{VY}$ Since $\angle T \cong \angle W, \overline{TU} \cong \overline{WU}$ and $\overline{TV} \cong \overline{VX}$, because if base angles of a triangle are congruent, then the sides opposite them are congruent; therefore, $\overline{TU} \cong \overline{XY}$, by transitive, and $\overline{VU} \cong \overline{VY}$ by segment subtraction.
12. The angle to the right of 110° would be its supplement since they are a linear pair, so $180 - 110 = 70^\circ$; Since the two legs are congruent, the two base angles must be congruent, so $y = 70^\circ$; then since the three angles of a triangle must equal 180, $180 - 70 - 70 = 40^\circ$
16. Since the two legs are congruent, the two base angles must be congruent, and the three angles of a triangle must equal 180, so $180 - 58 - 58 = 64^\circ$
22. a. \overline{KM} d. Definition of a Bisector
 b. \overline{KM} e. Reflexive Property
 c. Given f. SSS
 g. CPCTC
28. Perimeter is all sides added together so $20 = x + (2x - 5) + (2x - 5)$ Add like terms
 $20 = 5x - 10$ addition $30 = 5x$ division $6 = x$
32. All the sides in the top triangle are equal, so the angles must all be 60° ; $90 - 60 = 30 = n$
 and $180 - 90 - 30 = 60 = m$
38. Given $\triangle LMN \cong \triangle PQR$, side $LN =$ side RP so $10 = 2x + 4$, subtract so $6 = 2x$ and divide so $3 = x$
 side $LM =$ side PQ which is x making it 3.