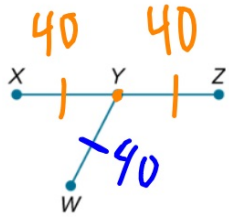
w/b pg 158 bottom

Check

Given that Y is the midpoint of $\overline{XZ}$ and $\overline{XY} \cong \overline{WY}$, write a paragraph proof to show that $\overline{WY} \cong \overline{YZ}$

Given: Y is the midpoint of $\overline{XZ}$; $\overline{XY} \cong \overline{WY}$

Prove: $\overline{WY} \cong \overline{YZ}$



XY = YZ
WY = XY

Proof:

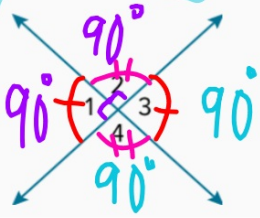
Because Y is the midpoint of $\overline{XZ}$, $\overline{XY} \cong \overline{YZ}$ by the Midpoint Theorem. $\overline{XY} \cong \overline{WY}$ is given. By the definition of Congruence, $XY = WY$ and $XY = YZ$. By the Symmetric Property of Equality, $XY = WY$ can be written as $WY = XY$. By the Transitive Property of Equality, $WY = YZ$. By the definition of Congruence, $\overline{WY} \cong \overline{YZ}$.

XY = WY | WY = XY

Complete the proof.

Given: $\angle 1 \cong \angle 2$

Prove: $\angle 3 \cong \angle 4$



w/b pg 175 top

$1 = 2$

$3 = 1$

$2 = 4$

$3 = 2$

Statements	Reasons
1. $\angle 1 \cong \angle 2$	1. Given
2. $\angle 1 \cong \angle 3$; $\angle 2 \cong \angle 4$	2. vertical angles
3. $\angle 3 \cong \angle 1$	3. symmetric prop
4. <3=<2	4. transitive prop (Step 1 & 3)
5. $\angle 3 \cong \angle 4$	5. transitive prop (Step 2 & 4)

$1 = 3 \mid 3 = 1$