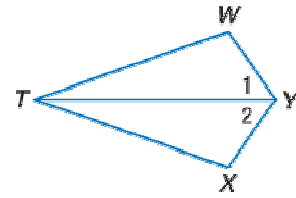


## Lesson 4-3

## Example 1

**Given**  $\angle 1 \cong \angle 2$ ;  $\overline{XY} \cong \overline{WY}$

**Prove**  $\angle W \cong \angle X$

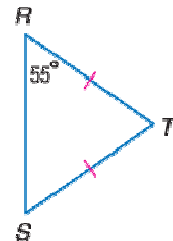


## Solution

Statements	Reasons
1. $\angle 1 \cong \angle 2$ ; $\overline{XY} \cong \overline{WY}$	1. Given
2. $\overline{TY} \cong \overline{TY}$	2. Reflexive Property
3. $\triangle TYW \cong \triangle TYX$	3. SAS Postulate
4. $\angle W \cong \angle X$	4. CPCTC

## Example 2

**DESIGN** An artist is positioning the design elements for a new company logo. At the center of the logo is the triangle shown in the figure. Find  $m\angle T$ .



## Solution

Since  $TR = TS$ ,  $\triangle TRS$  is isosceles with base  $\overline{RS}$ . By the isosceles triangle theorem,  $m\angle R = m\angle S = 55^\circ$ . By the triangle-sum theorem,  $m\angle T + 55^\circ + 55^\circ = 180^\circ$ , or  $m\angle T = 70^\circ$ .