

5.4 Isosceles & Equilateral Triangles CYU

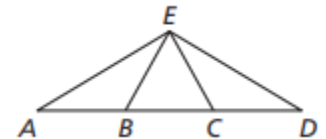
Use when you get it right all by yourself
S Use when you did it all by yourself, but made a silly mistake
H Use when you could do it alone with a little help from teacher or peer
G Use when you completed the problem in a group
X Use when a question was attempted but wrong (get help)
N Use when a question was not even attempted

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Completing Congruence Statements	1, 2		
Determining AAS, SAS, ASA, HL, SSS	1, 2		12
Equilateral Triangles	3, 4	6, 7, 10	13
Isosceles Triangles	5	6, 7, 9	8, 11, 12
Perimeter	9, 10		

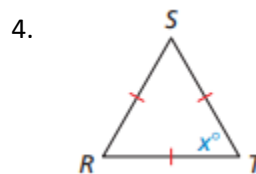
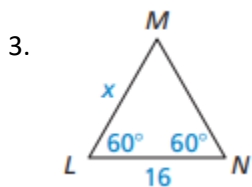
Complete the statement. State which theorem you used. Be sure to mark your diagram.

1. If $\angle D \cong \angle CED$, then _____ \cong _____.

2. If $\angle EBC \cong \angle ECB$, then _____ \cong _____.



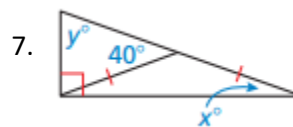
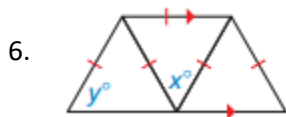
Find the value of x .



5. **MODELING WITH MATHEMATICS** The dimensions of a sports pennant are given in the diagram. Find the values of x and y .



Find the values of x and y .



8. **REASONING** The base of isosceles $\triangle XYZ$ is \overline{YZ} . What can you prove? Select all that apply.

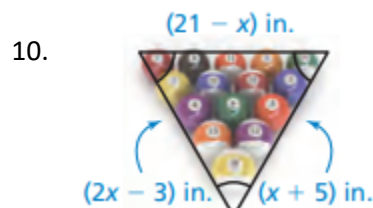
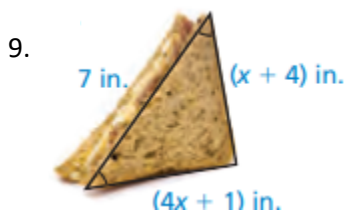
A) $\overline{XY} \cong \overline{XZ}$

B) $\angle X \cong \angle Y$

C) $\angle Y \cong \angle Z$

D) $\overline{YZ} \cong \overline{ZX}$

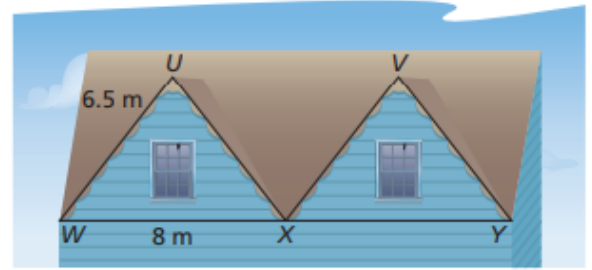
Find the perimeter of the triangle.



11. **PROBLEM SOLVING** The triangular faces of the peaks on a roof are congruent isosceles triangles with vertex angles U and V.

a) Name two angles congruent to $\angle WUX$. Explain your reasoning.

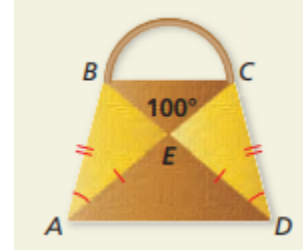
b) Find the distance between points U and V.



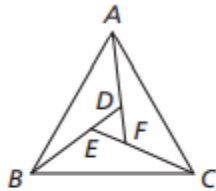
12. **HOW DO YOU SEE IT?** You are designing fabric purses to sell at the school fair.

a) Explain why $\triangle ABE \cong \triangle DCE$.

b) Name the isosceles triangles in the purse.



13. **PROOF** Using a two-column proof, use the diagram to prove that $\triangle DEF$ is equilateral.



Given $\triangle ABC$ is equilateral.
 $\angle CAD \cong \angle ABE \cong \angle BCF$

Prove $\triangle DEF$ is equilateral.

CYU Reflection: How far can you go: basic, intermediate, or advanced?

Rate your mastery level!

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

1	2	3	4	5	6	7	8
Basic		Intermediate			Advanced		Solved ALL!