Name _____   Pd ____ Date _____
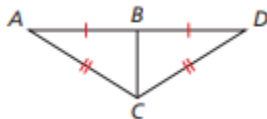
5.7 Using Congruent Triangles CYU

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Reflexive POC	1, 2, 3		7
CPCTC	1 - 3	10	6
Alternate Interior Angles	2	5	
Definition of Isosceles Triangle	3	4, 5	6, 7
ASA, AAS, SSS, HL, SAS	9, 10	4, 5	6, 7
Definition of Vertical Angles	10	5	6, 7
Area of Triangles			8

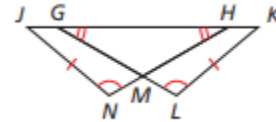*Explain how to prove that the statement is true.*

1. $\angle A \cong \angle D$

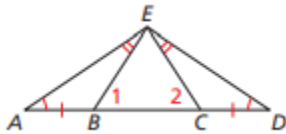2. $\overline{AC} \cong \overline{DB}$
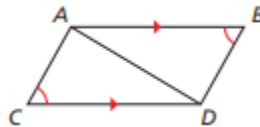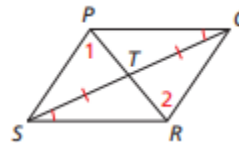
3. $\overline{GK} \cong \overline{HJ}$

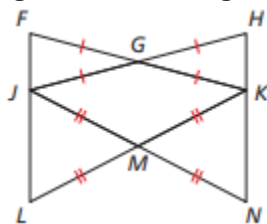*Write a plan to prove that angle one is congruent to angle two.*
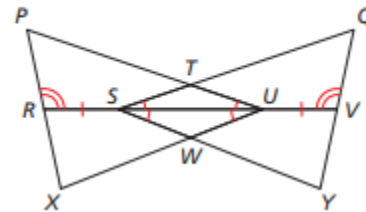
4.

5.

Use the information given in the diagram to write a two-column proof.

6. **Prove** $\overline{FL} \cong \overline{HN}$

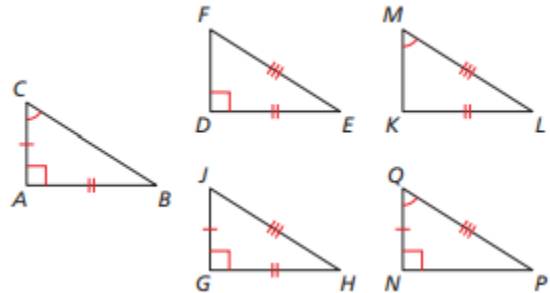7. **Prove** $\triangle PUX \cong \triangle QSY$

8. **HOW DO YOU SEE IT?** Use the tangram puzzle to answer the two questions.

a) Which triangle(s) have an area that is twice the area of the purple triangle?

b) How many times greater is the area of the orange triangle than the area of the purple triangle.

9. **ATTENDING TO PRECISION** Which triangles are congruent to ΔABC? Select all that apply.

10. **MODELING WITH MATHEMATICS** Explain how to find the distance across the canyon.