

Honors Geometry – 6.5 TRIANGLE INEQUALITY DAY TWO 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

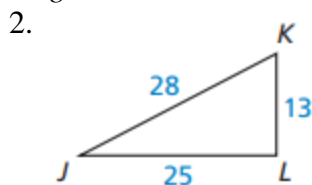
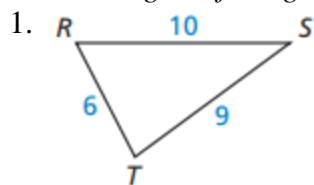
G Use when you completed the problem in a group

X Use when a question was attempted but wrong (get help)

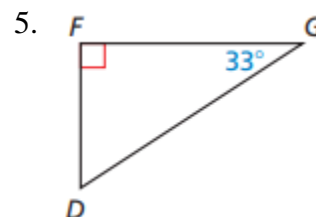
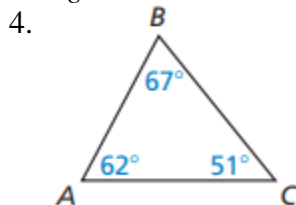
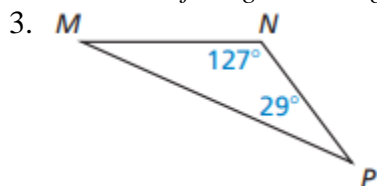
N Use when a question was not even attempted

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Triangle or not a triangle	8 - 10		
Third side inequality	6	7	
Determining shortest & longest sides	3 - 5		
Determining smallest & largest angles	1, 2		
Side & Angle inequality comparison	11	12	13, 14

List the angles of the given triangle from smallest to largest.



List the sides of the given triangle from shortest to longest.



Write an inequality for the range of possible lengths of the third side of the triangle given the lengths of the other two sides.

6. 5 inches & 12 inches

7. 2 feet & 40 inches

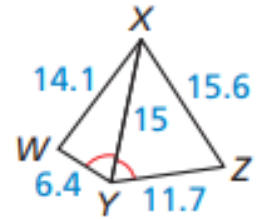
Is it possible to construct a triangle with the given side lengths? If not, explain why not.

8. 6, 7, 11

9. 3, 6, 9

10. 28, 17, 46

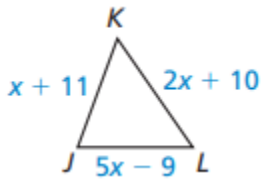
11. **REASONING** In the figure, \overline{XY} bisects $\angle WYZ$. List all six angles of $\triangle XYZ$ and $\triangle WXY$ in order from smallest to largest. Explain your reasoning.



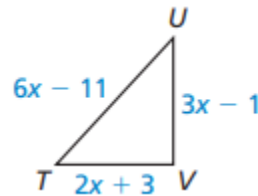
12. **MATHEMATICAL CONNECTIONS** In $\triangle DEF$, $m\angle D = (x + 25)^\circ$, $m\angle E = (2x - 4)^\circ$, and $m\angle F = (63)^\circ$. List the side lengths and angle measures of the triangle in order from least to greatest.

Describe the possible values of x .

13.



14.



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!