Name:_____ Period:_____

6.5 Practice Problems – Inequalities in Triangles

Can the following measures be the sides of a triangle?

1) 15, 7, 8

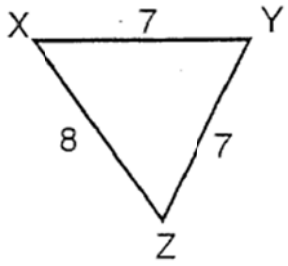
2) 0.5, 1.09, 0.6

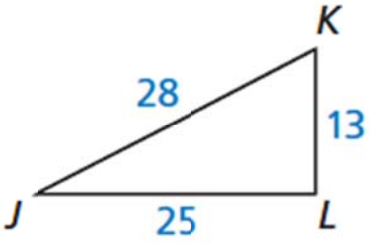
Find the range of possible side lengths for the third side of a triangle given two side lengths.

3) 13, 20

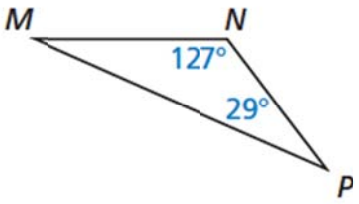
4) 4.2, 4.2

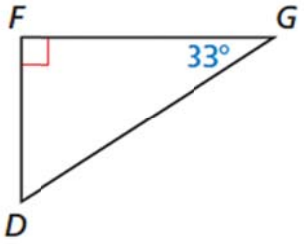
5) Order the angle measures from largest to smallest.

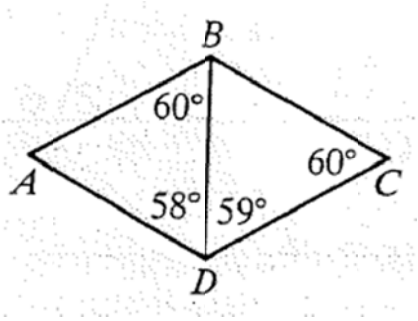


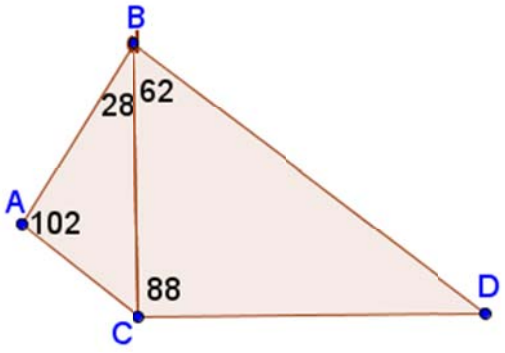


6) Order the side lengths from longest to shortest.









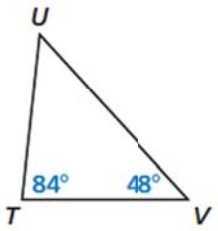
7) **PROBLEM SOLVING** Which statement about $\triangle TUV$ is false?

Ⓐ $UV > TU$

Ⓑ $UV + TV > TU$

Ⓒ $UV < TV$

Ⓓ $\triangle TUV$ is isosceles.



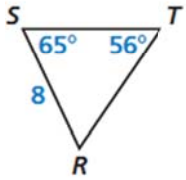
8) **PROBLEM SOLVING** In $\triangle RST$, which is a possible side length for ST? Select all that apply.

Ⓐ 7

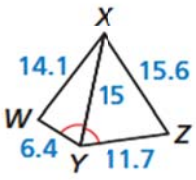
Ⓑ 8

Ⓒ 9

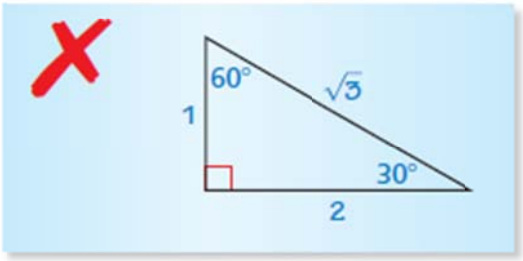
Ⓓ 10



9) **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.

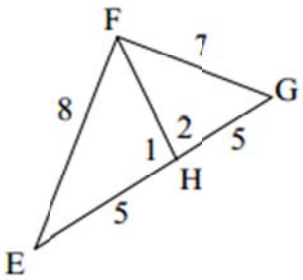


10) **ERROR ANALYSIS** Describe and correct the error in labeling the side lengths 1, 2, and $\sqrt{3}$ on the triangle.

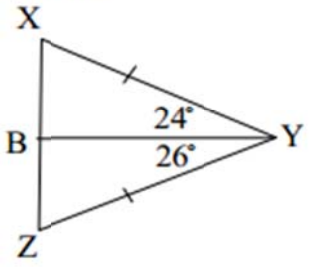


11) Which side or angle is larger?

$m\angle 1, m\angle 2$



$\overline{XB}, \overline{ZB}$



$\overline{KP}, \overline{KG}$