

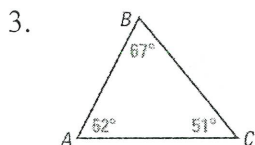
1. For each angle in $\triangle ABC$, name the side that is opposite that angle.



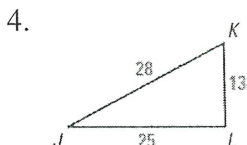
$\angle A \rightarrow \overline{BC}$
 $\angle B \rightarrow \overline{CA}$
 $\angle C \rightarrow \overline{AB}$

2. How can you tell from the angle measures of a triangle which side of the triangle is the longest? The shortest?

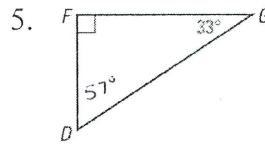
List the sides and the angles in order from smallest to largest.



$\angle C, \angle A, \angle B$
 $\overline{AB}, \overline{BC}, \overline{CA}$



$\angle J, \angle K, \angle L$
 $\overline{KL}, \overline{JL}, \overline{JK}$



$\angle G, \angle D, \angle F$
 $\overline{FD}, \overline{FG}, \overline{GD}$

Is it possible to construct a triangle with the given side lengths? **Show work to justify your answer.**

6. 11, 6, 7

Yes

7. 34, 65, 28

No

8. 6, 10, 16

No

9. Which group(s) of side lengths can be used to construct a triangle? **Show work to justify your answer.**

A. 3 yd, 4 ft, 5 yd

* Careful with units *

B. 3 yd, 5 ft, 8 ft

C. 11 in, 16 in, 27 in

D. 2 ft, 16 in, 1 ft

Describe the possible lengths of the third side of the triangle given the lengths of the other two sides.

10. 5 inches and 12 inches

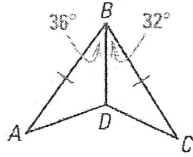
7 in < x < 17 in

11. 2 feet and 40 inches

16 in < x < 64 in

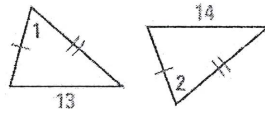
Complete with $<$, $>$ or $=$. Justify your answer.

12.



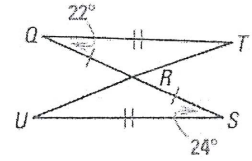
$AD > CD$

13.



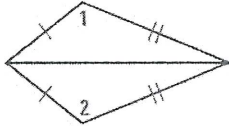
$m\angle 1 < m\angle 2$

14.



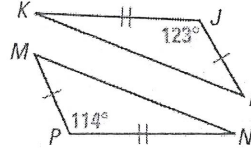
$TR < UR$

15.



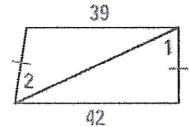
$m\angle 1 = m\angle 2$

16.



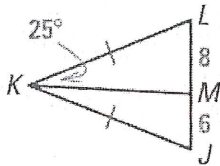
$MN < LK$

17.



$m\angle 1 > m\angle 2$

18. Which is a possible measure for $\angle JKM$?

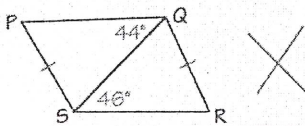


- 20°
- 30°

- 25°
- Cannot be determined

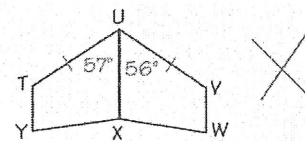
Explain why the student's reasoning is not correct.

19.



By the Hinge Theorem, $PQ < SR$.

20.



By the Hinge Theorem, $XW < XY$.