

Geometry

Chapter 5 Review

Relationships in Triangles

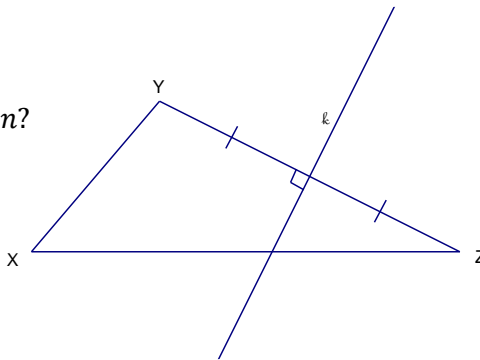
Name _____

Date _____

Hour _____

1) For $\triangle XYZ$, which type of line is shown?

- A) median
- B) angle bisector
- C) perpendicular bisector
- D) altitude

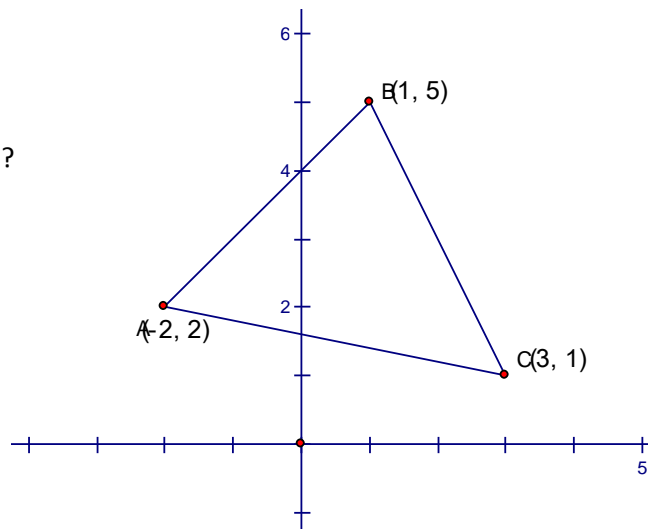


1) _____

2) What is the slope of the line with this equation? $y = 2x - 5$

2) _____

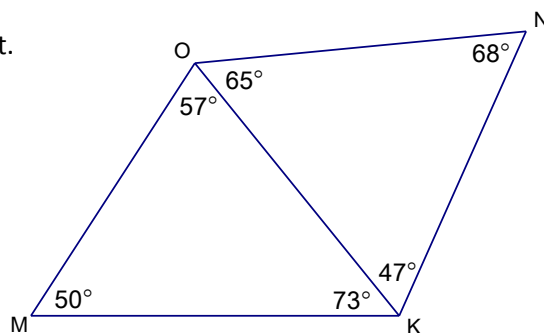
3) Which angle has the smallest measure?
(...show your work...)



3) _____

4) Find the longest segment.

- A) \overline{MO}
- B) \overline{NO}
- C) \overline{KN}
- D) \overline{KM}
- E) \overline{KO}



4) _____

5) Write the assumption you would make to start an indirect proof.

5) _____

Given: \overline{CD} is not a median of $\triangle ABC$

$$\angle 1 \cong \angle 2$$

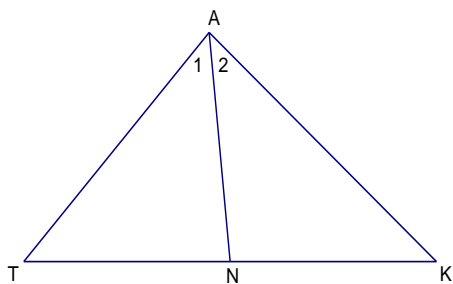
Prove: $\overline{CB} \not\cong \overline{CA}$

6) Complete the following proof with indirect reasoning.

Given: $\angle 1 \not\cong \angle 2$

$\overline{TN} \cong \overline{NK}$

Prove: \overline{AN} is not an altitude



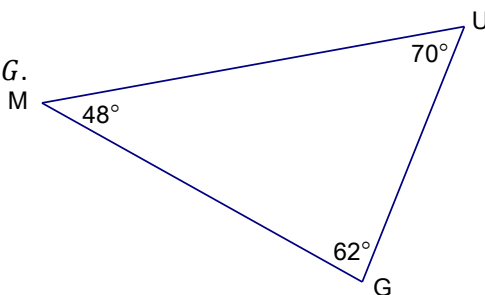
7) Name the shortest side in $\triangle MUG$.

A) \overline{MU}

B) \overline{UG}

C) \overline{GM}

D) can't tell



7) _____

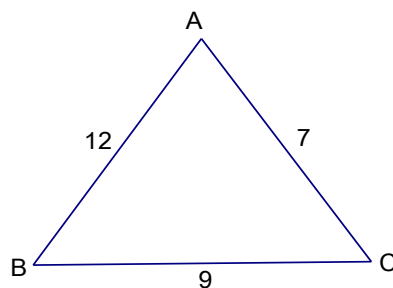
8) Name the angle with the greatest measure in $\triangle ABC$.

A) $\angle A$

B) $\angle B$

C) $\angle C$

D) can't tell



8) _____

For questions 9 – 11, refer to the figure to determine which is a true statement for the given information.

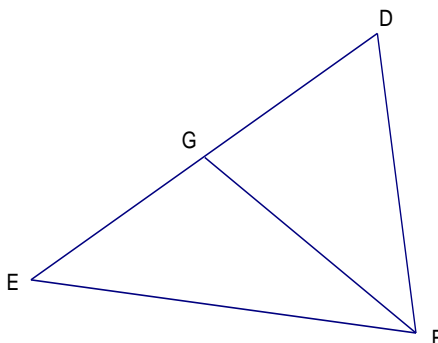
9) \overline{FG} is an altitude.

A) $DF = EF$

B) $DG = GE$

C) $\angle DFG \cong \angle EFG$

D) $\angle DGF$ is a right angle



9) _____

10) \overline{FG} is a median.

10) _____

- A) $DF = EF$
- B) $DG = GE$
- C) $\angle DFG \cong \angle EFG$
- D) $\angle DGF$ is a right angle

11) \overline{FG} is an angle bisector.

11) _____

- A) $DF = EF$
- B) $DG = GE$
- C) $\angle DFG \cong \angle EFG$
- D) $\angle DGF$ is a right angle

12) Two sides of one triangle are congruent to two sides of another triangle. The third side of the first triangle is longer than the third side of the second triangle. What theorem allows you to make a conclusion about the included angles of the first two sides?

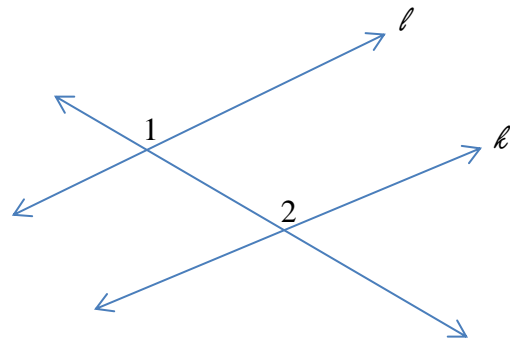
12) _____

- A) Exterior Angle Inequality Theorem
- B) Triangle Inequality Theorem
- C) SSS Inequality Theorem
- D) SAS Inequality Theorem

13) Complete the following proof with indirect reasoning.

Given: $\ell \nparallel k$

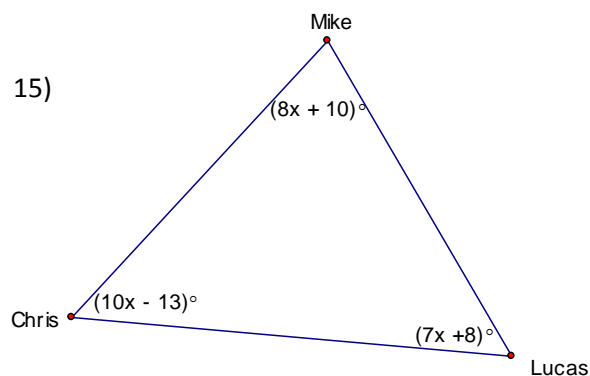
Prove: $\angle 1 \neq \angle 2$



14) Explain why this set of numbers can or can't be the lengths of the sides of a triangle:

11, 12, 23

15)

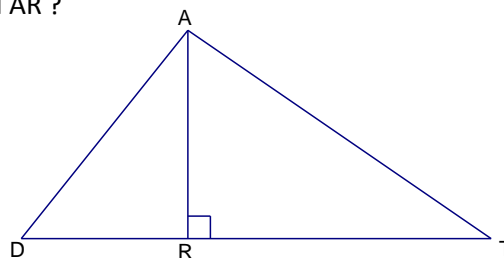


Which friends are closest together?

Which friends are furthest apart?

16) What is the relationship between the lengths of AD and AR ?

- A) $AD > AR$
- B) $AD < AR$
- C) $AD = AR$
- D) can't tell



17) Which of these is at the **end** of an indirect proof?

- A) State that a contradiction means your assumption was true, thus what you're trying to prove is true.
- B) State that a contradiction means your conclusion was false, thus what you're trying to prove is true.
- C) State that a contradiction means your assumption was false, thus what you're trying to prove is true.

18) Use $<$, $>$, or $=$ to compare the measures of $\angle 1$ and $\angle 2$.

