# Unit 9 Triangles - Sides

Unit 9 Geometry
Day 5

Name _____
Date _____ Period _____

## Warm up

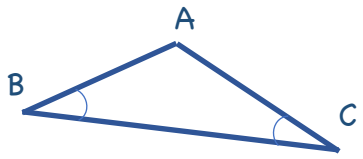
Angle A (∠BAC) is 120° and angles B (∠ABC) and C (∠ACB) are congruent. What is angle B (∠ABC)?

A. 30°

B. 60°

C. 120°

D. 180°




| ***Triangle postulate*** | The three internal angles of a triangle add up to _____ |
|---|---|

## Triangles – Sides

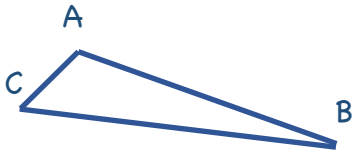
Fill in the blanks using the words at the bottom

The side length of a triangle corresponds with the angle measure _____ the side.

Ex: Triangle ABC is shown at right.

∠A is the _____ angle and line BC is the _____ side.

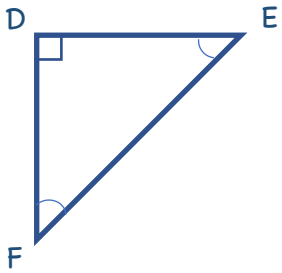
∠B is the _____ angle and line BC is the _____ side.




Ex: Triangle DEF is shown at right.

∠E and ∠F have the _____ (congruent) angles

and line DE and DF have the same (_____) lengths.




In these two triangles, ABC and DEF:

∠A corresponds to side _____ (opposite the angle).

∠B _____ to side AC (opposite the angle).

_____ corresponds to side DE (opposite the angle).

∠E corresponds to side _____ (opposite the angle).

(∠C, BC, Congruent, Corresponds, DF, ∠F, Largest, Longest, Opposite, Same, Shortest, Smallest)

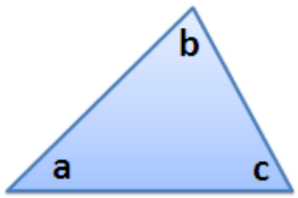
## Triangle Inequality Theorem

If the sum of the two shortest sides is greater than the third side, then the lengths will form a triangle.

IF a triangle ABC has side lengths of AB = 7 cm and AC = 9 cm

Side BC must be longer than (<) _____

& shorter than (<) _____



Unit: Geometry
Homework 2

Name _____

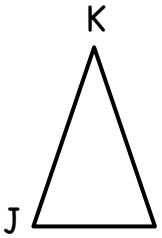
Date _____ Pd_____

# SIDE LENGTHS OF A TRIANGLE

Students were asked to create true statements about side lengths of triangles. Circle the names of the students who correctly completed the task. Then, unscramble the underlined letters of the circled names to answer the riddle at the bottom.

## BETHANY

side length KL corresponds with angle JKL

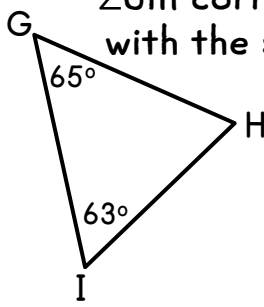



## ISAIAH

Three side lengths of 23, 32, and 45 units will form a triangle.

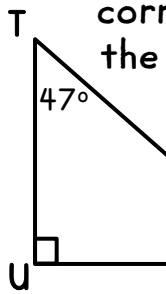
## PABLO

∠GIH corresponds with the shortest side




## QUINN

side length TV corresponds with the largest angle

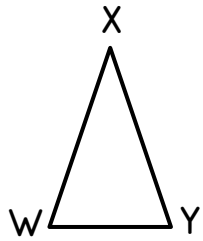



## APRIL

If triangle QRS has side lengths of QR = 12.3 and RS = 8.8, then the greatest length side QS could be is 21.1.

## TROY

side length WX corresponds with angle WYX

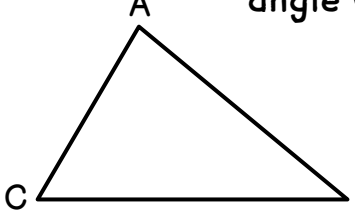



## TRENT

Three side lengths of 6, 8, and 15 units will form a triangle.

## SAMANTHA

side length BC corresponds with angle CAB




## MEGAN

Three side lengths of 5.2, 6.3, and 10.5 units will form a triangle.

## WHAT KIND OF TRIANGLE IS NEVER WRONG?

_____