

Math 7  
Unit 8 - Day 104

Name: \_\_\_\_\_

Classifying Triangles

≅  
Congruent Segments: same side length

≅  
Congruent Angles: same angle measure

Classifying Triangles by Sides:

- Scalene  $\Delta$  - 0 sides
- Isosceles  $\Delta$  - 2 sides
- equilateral  $\Delta$  - 3 sides

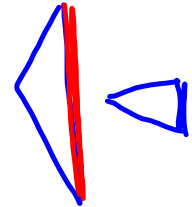
Classifying Triangles by Angles:

- acute  $\Delta$  - all acute  $\angle$ s
- obtuse  $\Delta$  - (1) obtuse  $\angle$
- right  $\Delta$  - (1)  $90^\circ \angle$
- equilateral - (3)  $60^\circ \angle$ s

A triangle that is equilateral and equiangular is a regular polygon.

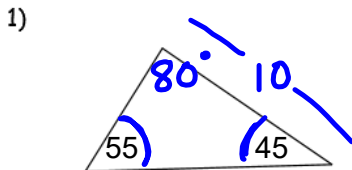
The longest side of a triangle is opposite the largest angle.

The shortest side of a triangle is opposite the smallest angle.

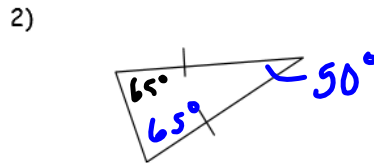


Classify each triangle by its sides and angles and find the missing angles.

$$\begin{array}{r} - \\ 55 \\ 45 \\ \hline 100 \end{array}$$

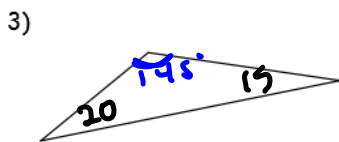


Angles: Acute  $\Delta$   
Sides: Scalene  $\Delta$

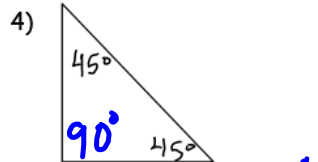


Angles: Acute  $\Delta$   
Sides: Isosceles  $\Delta$

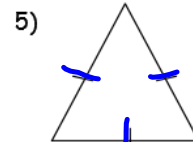
$$\begin{array}{r} 20 \\ 15 \\ \hline 35 \\ 180 \\ - 35 \\ \hline 145 \end{array}$$



Angles: Obtuse  $\Delta$   
Sides: Scalene  $\Delta$



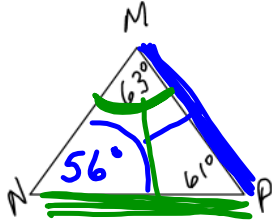
Angles: Right  $\Delta$   
Sides: Isosceles  $\Delta$



Angles: Acute  $\Delta$   
Sides: Equilateral  $\Delta$

6) Find the missing angle.

Name the longest and shortest side.

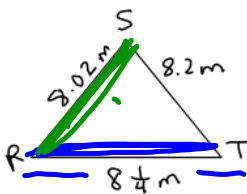


$m \angle N = 56^\circ$

shortest side: MP

longest side: NP

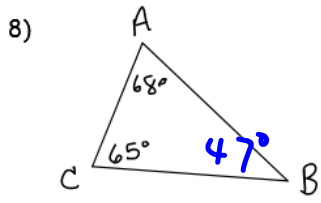
7) Find the largest and smallest angle.



Smallest angle:  $\angle T$

Largest angle:  $\angle S$

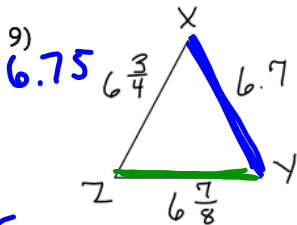
$$\begin{array}{r} 68 \\ 65 \\ \hline 133 \end{array}$$



$m \angle B = 47^\circ$

Shortest side: AC

Longest side: CB



Smallest angle:  $\angle Z$

Largest angle:  $\angle X$

$$\begin{array}{r} .75 \\ .125 \\ \hline .875 \end{array}$$