

10-16-17 5<sup>th</sup> Geo

## Classifying Triangles

Side length vs. Angle Measure

Isosceles	Obtuse
Equilateral	Acute
Scalene	Right

### Side length

Scalene  $\rightarrow$  No sides are = in length

Isosceles  $\rightarrow$  2 sides are = in length

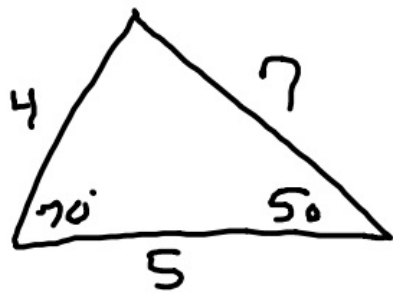
Equilateral  $\rightarrow$  All sides are = in length  
(All  $\angle$ 's =  $60^\circ$ )

### Angle

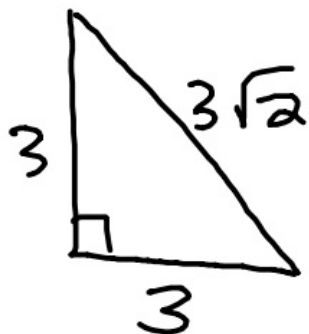
Acute  $\rightarrow$  all angles are under  $90^\circ$

Obtuse  $\rightarrow$  one angle is over  $90^\circ$

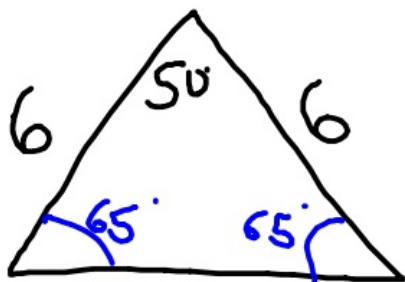
Right  $\rightarrow$  has one angle =  $90^\circ$



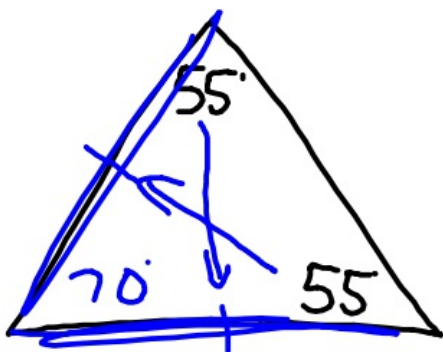
Acute scalene



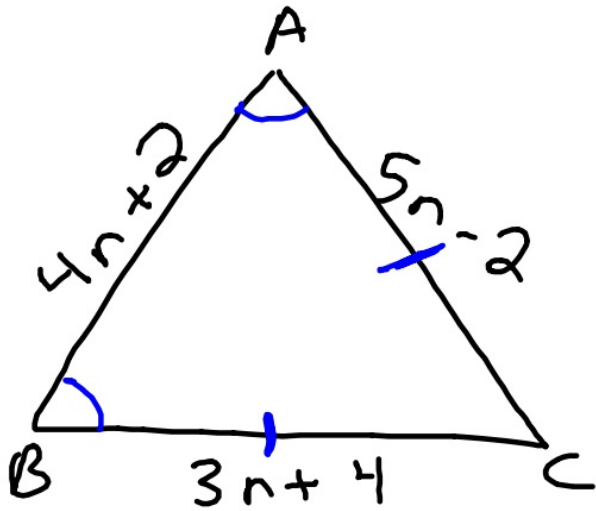
Right isosceles



acute isosceles



acute isosceles



$\triangle ABC$  is an isosceles  $\triangle$  with  $\overline{AC} \cong \overline{BC}$ . Find the length of  $AB$ .

$$\begin{array}{r}
 5n - 2 = 3n + 4 \\
 -3n \quad -3n \\
 \hline
 2n - 2 = 4 \\
 +2 \quad +2 \\
 \hline
 2n = 6 \\
 n = 3
 \end{array}$$

$$\begin{aligned}
 AB &= 4 \cdot n + 2 \\
 &= 4 \cdot 3 + 2 \\
 &= 14
 \end{aligned}$$

10-16-17 6<sup>th</sup> Geo

## Classifying Triangles

<u>Side length</u>	<u>Angle</u>
Isosceles	Right
Equilateral	Acute
Scalene	Obtuse

Scalene  $\rightarrow$  No sides = in length

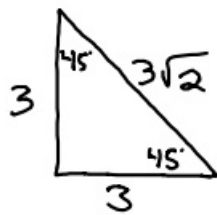
Isosceles  $\rightarrow$  2 sides = in length

Equilateral  $\rightarrow$  All 3 sides = in length  
(3  $60^\circ$  angles)

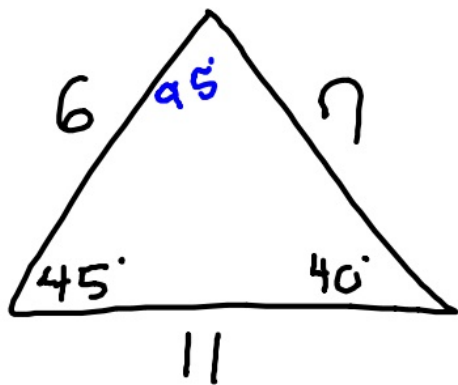
Acute  $\rightarrow$  all  $\angle$ 's less than  $90^\circ$

Obtuse  $\rightarrow$  one  $\angle$  more than  $90^\circ$

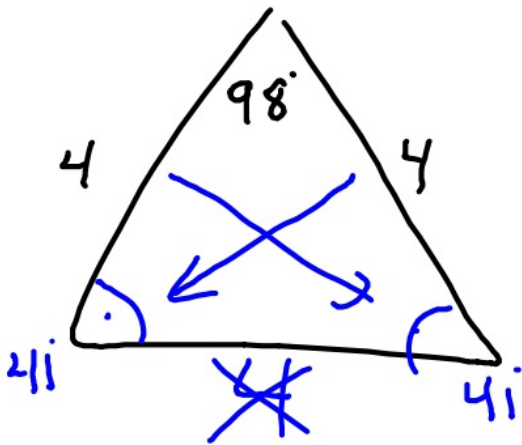
Right  $\rightarrow$  one  $90^\circ$  angle



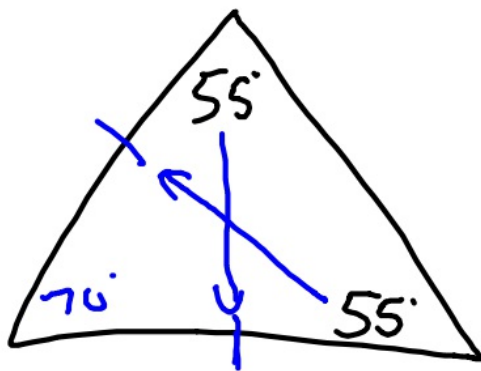
right isosceles



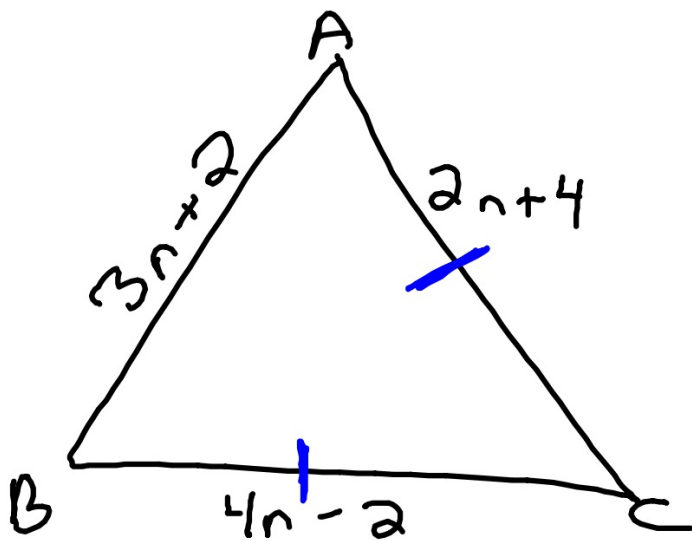
obtuse Scalene



Obtuse Isosceles



acute isosceles



$\triangle ABC$  is an  
isosceles  $\triangle$  with  
 $\overline{AC} \cong \overline{BC}$ . Find

$AB$

$$4n - 2 = 2n + 4$$

$$n = 3$$

$$\begin{aligned} AB &= 3n + 2 \\ &= 3 \cdot 3 + 2 \\ &= 11 \end{aligned}$$