APRIL 1, 2015

1ST
2ND

STARTER

When Hector, the new kid, asked Velda how old she was, she replied, "In two years, I'll be twice as old as I was five years ago.

How old is Velda now?

4/1 Triangles

New vocabulary word: **TRIANGLE**

Polygon with 3 sides

With your partner, name as many types of triangles as you can! Be prepared to describe them too.

Obtuse – one ∠ must bigger than 90°

Acute – all 3 ∠'s must be under 90°

Scalene – no sides are the same

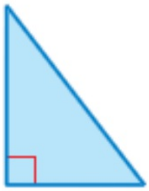
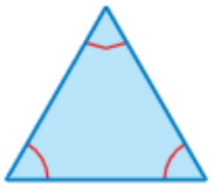
Isosceles – two sides the same

Equilateral – all side are equal

Right – one 90° angle

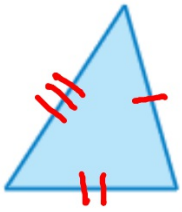
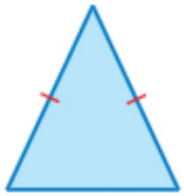
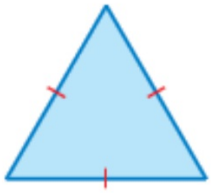
Equiangular – all ∠'s are the same

Classifying Triangles Using Angles

acute triangle	*obtuse* triangle	*right* triangle	*equiangular* triangle
			
all acute angles	1 obtuse angle	1 right angle	3 congruent angles

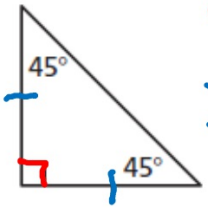
Classifying Triangles Using Sides

Congruent sides have the same length.

scalene triangle	*isosceles* triangle	*equilateral* triangle
		
no congruent sides	at least 2 congruent sides	3 congruent sides

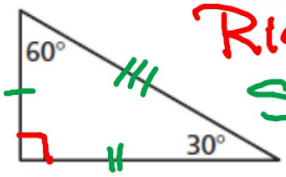
Classify the triangle.

1.

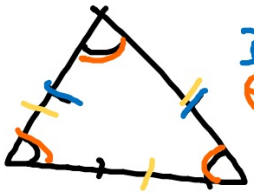


Right
Isosceles

2.

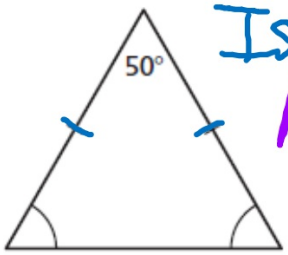


Right
Scalene



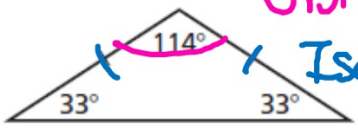
Isosceles
Equiangular
Equilateral
Acute

3.



Isosceles
Acute

4.



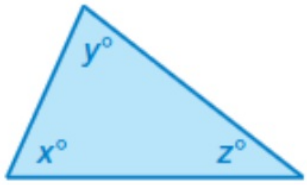
obtuse
Isosceles

Key Idea

Sum of the Angle Measures of a Triangle

Words The sum of the angle measures of a triangle is 180°.

Algebra $x + y + z = 180$



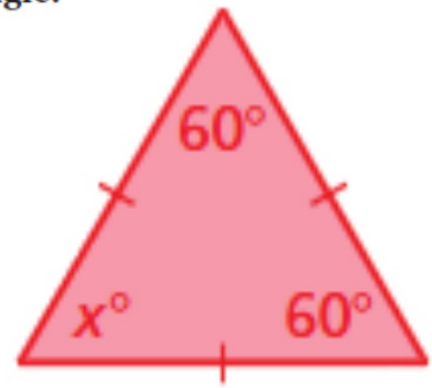
Find the value of x. Then classify the triangle.

$x + 78 + 27 = 180$

$x + 105 = 180$

$-105 \quad -105$

$x = 75$

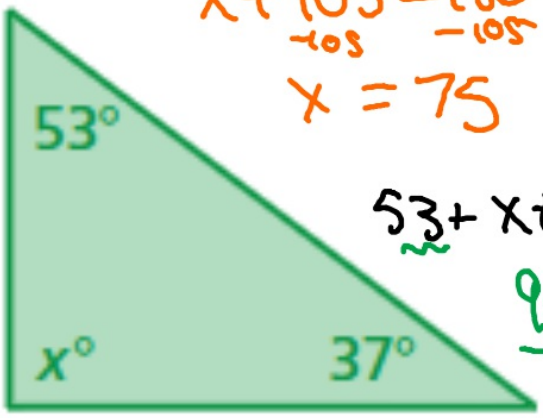


$x + 60 + 60 = 180$

$x + 120 = 180$

$-120 \quad -120$

$x = 60$



$53 + x + 37 = 180$

$90 + x = 180$

$-90 \quad -90$

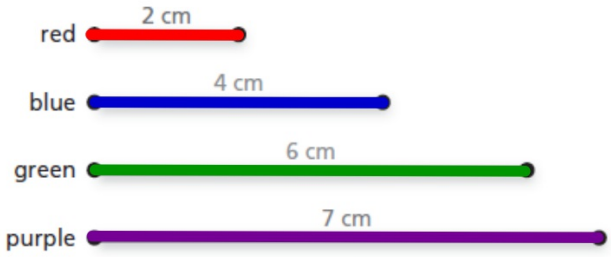
$x = 90$

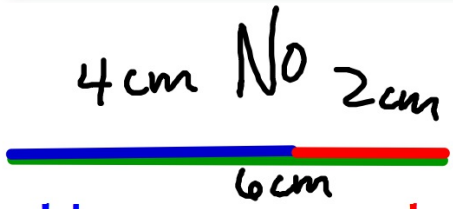
Can you create a triangle using the given combination of these colored segments?

red green purple

blue red purple

No!





blue green red

blue green purple

Tell whether a triangle can have the given angle measures. If not, change the first angle measure so that the angle measures form a triangle.

25°, 64°, 91°

$$\begin{array}{r} 25 \\ 64 \\ +\ 91 \\ \hline 180 \end{array}$$

Yes!

85°, 64°, 30°

$$\begin{array}{r} \cancel{85} \rightarrow 86 \\ 64 \\ 30 \\ \hline 179 \\ +\ 1 \\ \hline 180 \end{array}$$

33°, 140°, 12°

$$\begin{array}{r} \cancel{33} \rightarrow 28 \\ 140 \\ 12 \\ \hline 185 \\ -\ 5 \\ \hline 180 \end{array}$$

HOMEWORK

Pink WS 3

DUE Friday