

Day 6: Classifying Triangles and their parts AND Quiz

Warm-Up:

- 1) After altitude 9 Km, plane descends when ground distance from landing field is 175 Km. What is \angle of depr for this part of flight?

$$\tan(x) = \frac{9}{175} \quad x = \tan^{-1}\left(\frac{9}{175}\right)$$

$$x = 2.94^\circ$$

- 3) The San Jacinto column near Houston is 570 ft tall. If \angle of elev. for Derrick's line of sight is 75° and his eyes are 6ft off the ground, how far is he from the base of the column?

$$(x = 151.01 \text{ ft}) \quad \begin{aligned} \text{opp ft} &= 564 \\ \tan(75) &= \frac{564}{x} \end{aligned}$$

- 2) A ski slope 550 yd long with \angle of depr of 14° . Find vertical drop of slope.

$$\sin(14) = \frac{x}{550}$$

$$x = 550 \sin(14) \quad 133.1 \text{ yd}$$

- 4) Jimmy is 24 ft up a tree. His mom is 7 ft from the tree, telling him to come down. How far is Jimmy from his mom?

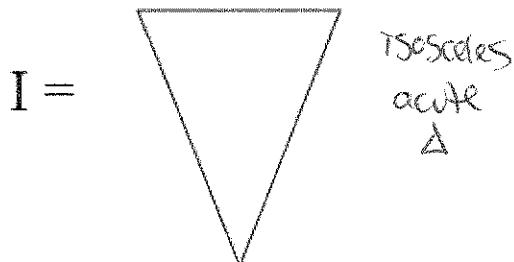
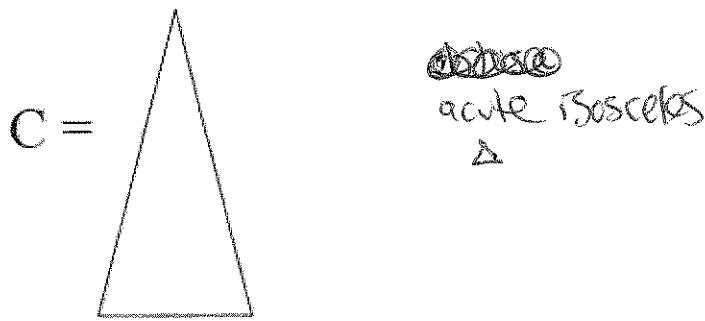
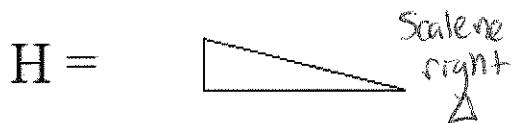
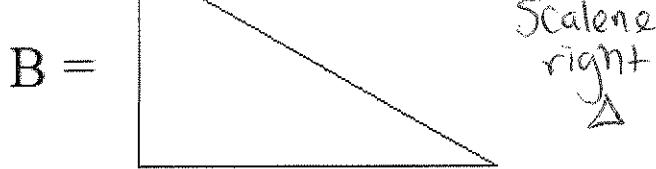
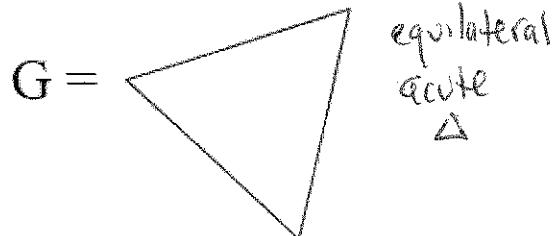
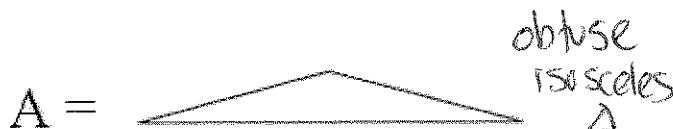
$$7^2 + 24^2 = x^2 \quad x = 25 \text{ ft}$$

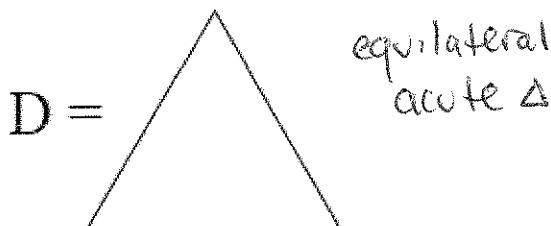
$$\sqrt{625} = x^2$$

Day 6 Lesson Introduction, Classifying Triangles

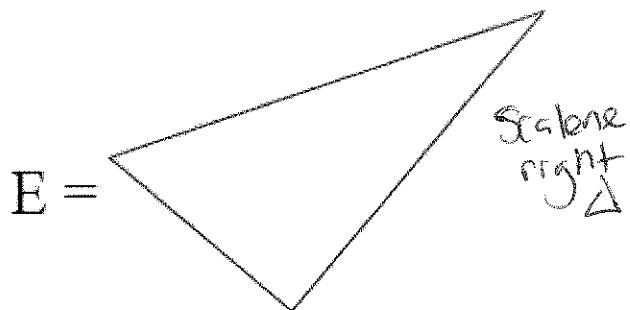
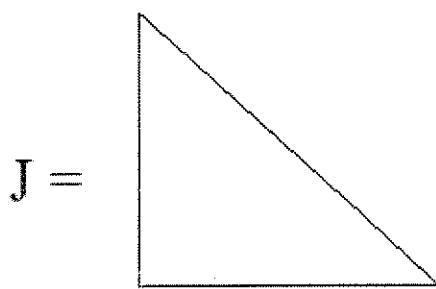
Measure the sides and angles of each triangle. Write the letter of the triangle in the recording table (on the next page) by classifying the triangle.

Triangle Sort



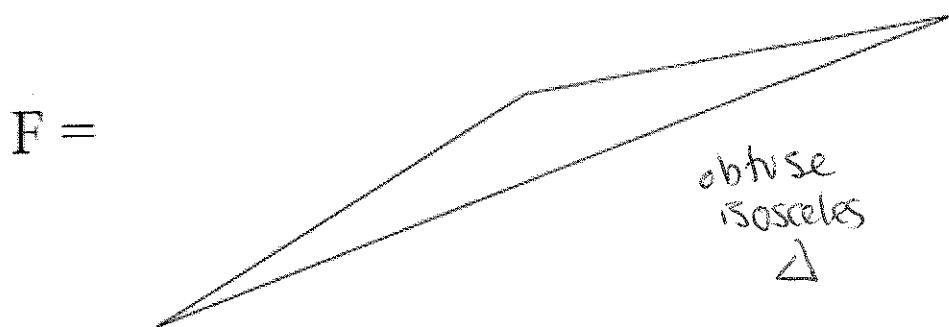


equilateral
acute \triangle



scalene
right \triangle

right scalene \triangle
(do a reflection/fold
of paper to see
, it's not isosceles)



obtuse
isosceles
 \triangle

Triangle Sort Recording Table

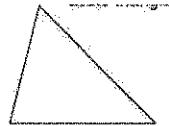
Acute	Obtuse	Right
G C I D	A F	B H E J
Scalene	Isosceles	Equilateral
B H E J	A C I F	G D

Day 6 Main Lesson, Notes

I. Classifying Triangles by their angles

a. Acute Triangle

- i. An acute triangle is a triangle that has all acute angles



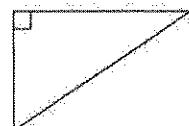
b. Obtuse Triangle

- i. An obtuse triangle is a triangle that has one obtuse angle



c. Right Triangle

- i. A right triangle is a triangle that has one right angle

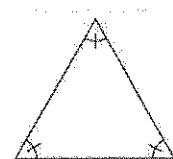


d. Oblique Triangle

- i. An oblique triangle is a non-right triangle
ii. These can be acute triangles or obtuse triangles

e. Equiangular Triangle

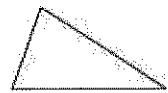
- i. An equiangular triangle is a triangle that has all congruent angles



II. Classifying Triangles by their sides

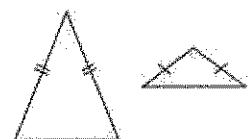
a. Scalene Triangle

- i. A scalene triangle is a triangle that no congruent sides (all different side lengths)



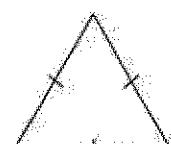
b. Isosceles Triangle

- i. An isosceles triangle is a triangle that has at least two congruent sides



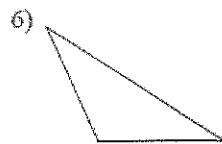
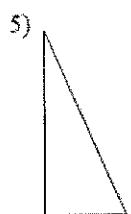
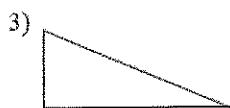
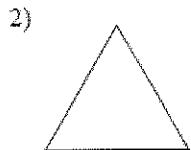
c. Equilateral Triangle

- i. An equilateral triangle is a triangle that has all congruent sides

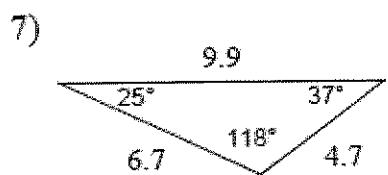


Day 6 Practice

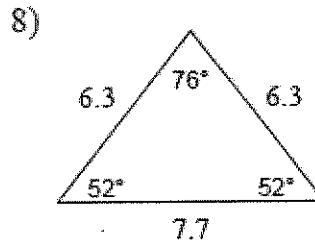
Classify each triangle by its sides. Base your decision on the actual lengths of the sides and the measures of the angles.



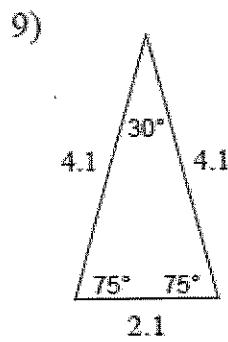
Classify each triangle by its angles and sides.



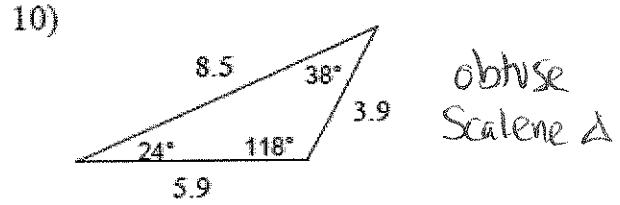
obtuse
Scalene \triangle



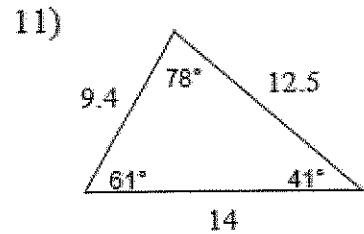
acute
Isosceles \triangle



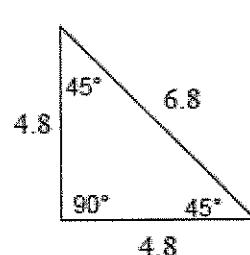
acute
Isosceles \triangle



obtuse
Scalene \triangle



acute
Scalene \triangle



Isosceles
right \triangle