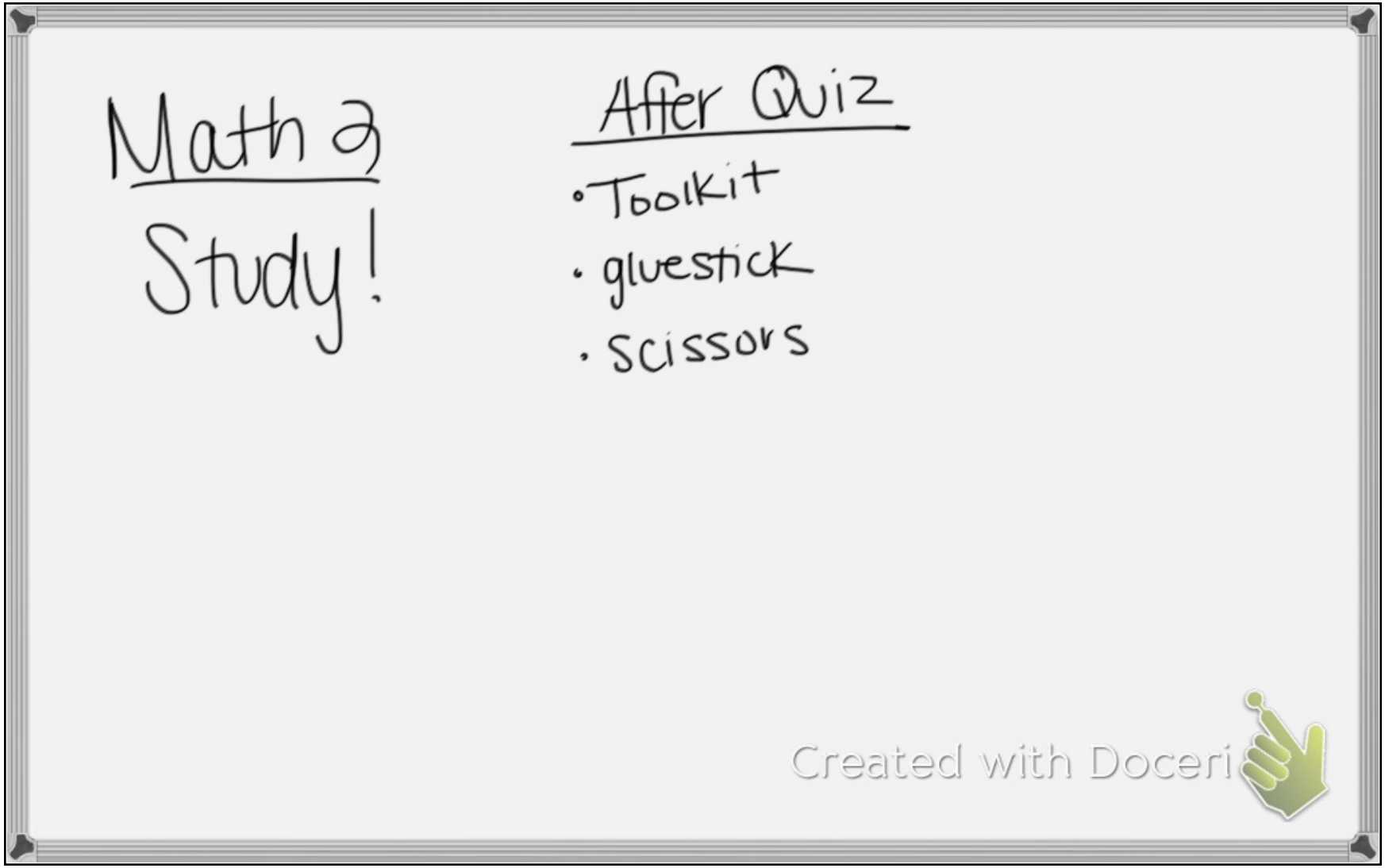
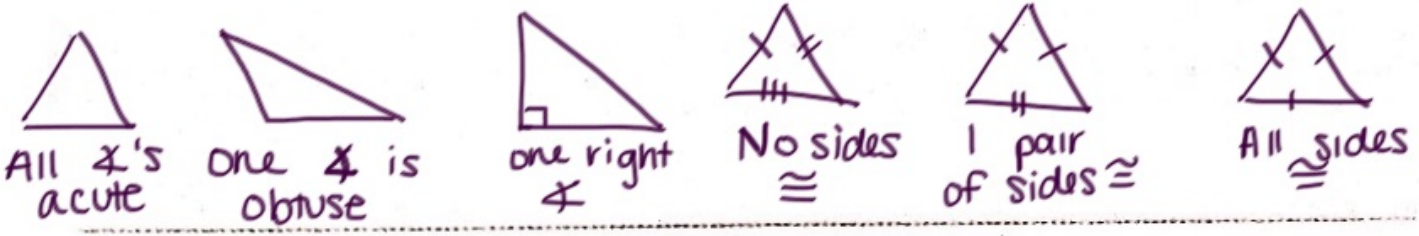

Math 9
Study!
After Quiz
• Toolkit
• gluestick
• scissors
Created with Doceri

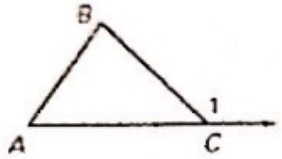
Triangle Classification

Acute | Obtuse | Right | Scalene | Isosceles | Equilateral



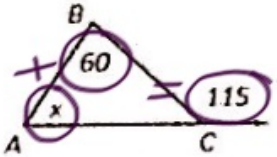
All ∠'s acute | one ∠ is obtuse | one right ∠ | No sides ≅ | 1 pair of sides ≅ | All sides ≅

Exterior Angles Theorem



$\angle A + \angle B = \angle 1$

a. Find the value of x.

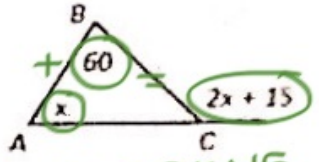


$x + 60 = 115$

$-60 \quad -60$

$x = 55$

b. Find the value of x.



$x + 60 = 2x + 15$

$-x \quad -x$

$60 = x + 15$

$-15 \quad -15$

$x = 45$

Triangle Inequalities

The sum of two ~~angles~~ sides on a triangle must be greater than the third ~~angle~~ side.

a. 3, 4, 6

$3 + 4 > 6$

yes

b. 5, 6, 10

$5 + 6 > 10$

yes

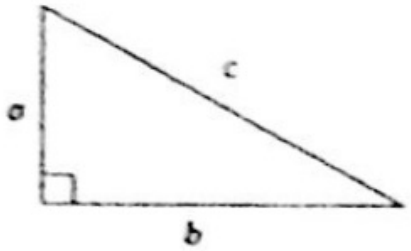
c. 5, 6, 11

$5 + 6 > 11$

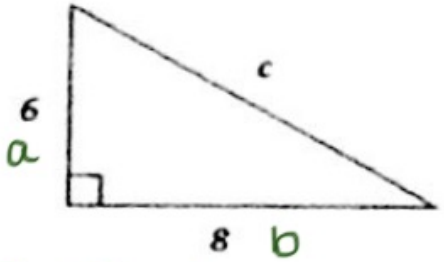
No

Pythagorean Theorem

$c^2 = a^2 + b^2$



a. Find the value of c



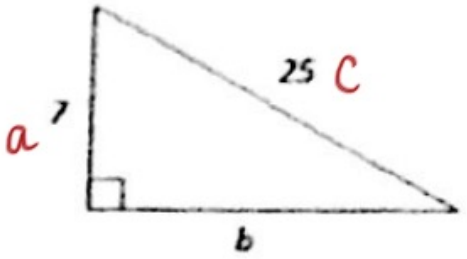
$6^2 + 8^2 = c^2$

$36 + 64 = c^2$

$\sqrt{100} = \sqrt{c^2}$

$c = 10$

b. Find the value of b



$7^2 + b^2 = 25^2$

$49 + b^2 = 625$

$-49 \quad -49$

$\sqrt{b^2} = \sqrt{576}$

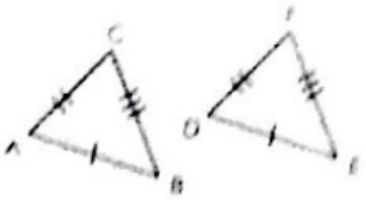
$b = 24$

If $c^2 = a^2 + b^2$, then the it is a right ***triangle.***

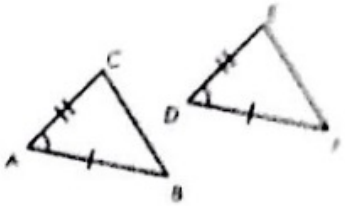
If $c^2 < a^2 + b^2$, then the it is a acute ***triangle.***

If $c^2 > a^2 + b^2$, then the it is a obtuse ***triangle.***

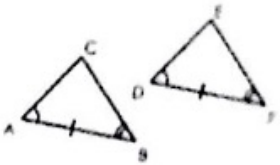
If three sides of one triangle are Congruent to three Sides of another triangle, then the triangles are congruent.

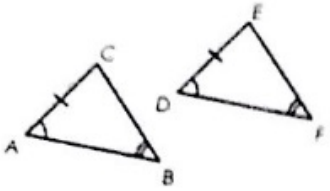


If two sides and the included angle of one triangle are Congruent to two sides and the included angle of another triangle, then the triangles are Congruent.

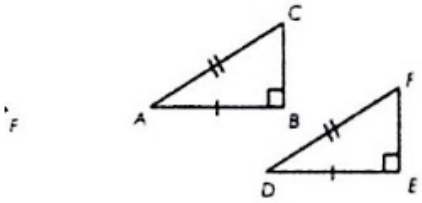


If two angles and the included side of one triangle are Congruent to two angles and the included side of another triangle, then the triangles are Congruent





If two angles and the non-included side of one triangle are congruent to two angles and the corresponding non-included side of another triangle, then the triangles are Congruent



If the hypotenuse and a leg of a right triangle are congruent to the hypotenuse and a leg of a second right triangle, then the two triangles are congruent.

AAA and ASS do not work to prove that triangles are congruent.