Name: _____ Date: _____

Mrs. Roumbos 8R Period _____

Pythagorean Theorem Converse

Homework

☆ make sure to explain why or why not!

1) Using the Pythagorean theorem, show that a triangle with sides of length 15, 8, and 17 units is a right triangle.

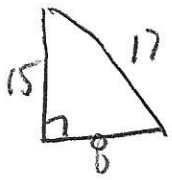
c

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

$15^2+8^2=17^2$

$225+64=289$

$289=289$ ✓



yes! It is a right triangle, Bc the lengths of the sides of the triangle satisfy the pythagorean theorem

2) Use the Pythagorean theorem to determine whether a triangle with sides of lengths 3, 7, and 2 units is a right triangle.

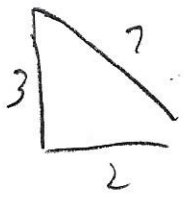
c

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

$3^2+2^2=7^2$

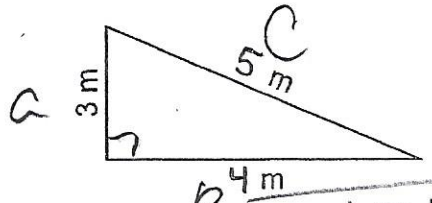
$9+4=49$

$13 \neq 49$.



NO! It is NOT a right triangle Bc the lengths of the sides of the triangle DO NOT satisfy the pythagorean theorem

3) Using the Pythagorean theorem, determine if the following triangle is a right triangle.



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

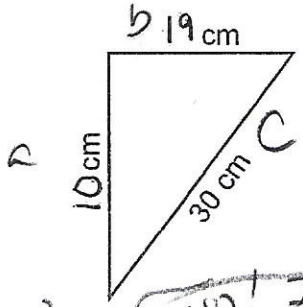
$3^2+4^2=5^2$

$9+16=25$

$25=25$ ✓

yes! It is a right triangle, Bc the lengths of the sides of the triangle satisfy the pythagorean theorem

4) Using the Pythagorean theorem, determine if the following triangle is a right triangle.



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

$10^2+19^2=30^2$

$100+361=900$

$461 \neq 900$

NO! It is NOT a right triangle Bc the lengths of the sides of the triangle DO NOT satisfy the pythagorean theorem