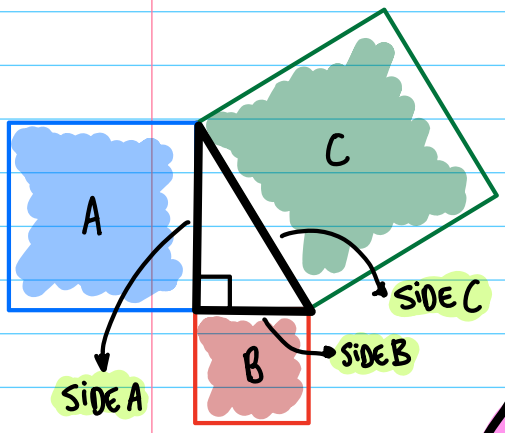
PYTHAGOREAN THEOREM



WHEN A TRIANGLE HAS A RIGHT ANGLE (90°) AND SQUARES ARE MADE ON EACH OF THE 3 SIDES...



...THEN THE BIGGEST SQUARE HAS THE EXACT SAME AREA AS THE SMALLER 2 COMBINED.

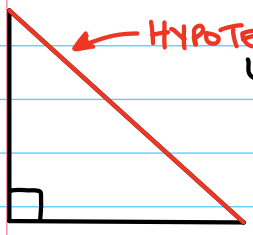
PYTHAGOREAN THEOREM



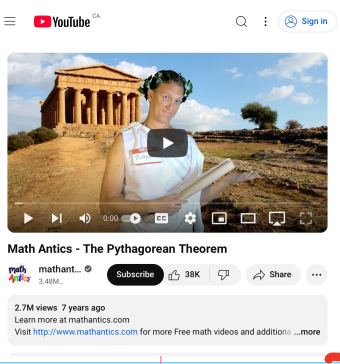
THE SUM OF THE SQUARES of SIDES A & SIDE B ($SIDE A^2 + SIDE B^2$) is EQUAL TO THE SQUARE of THE HYPOTENUSE / SIDE C ($SIDE C^2$).

$$A^2 + B^2 = C^2$$

THE HYPOTEN-WHAT?

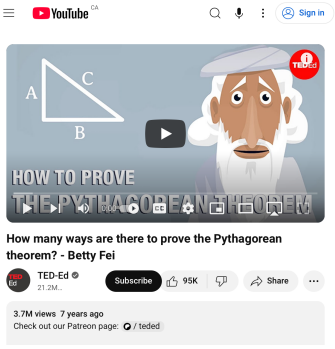


HYPOTENUSE → THE LONGEST SIDE OF A RIGHT TRIANGLE; SIDE THAT is OPPOSITE THE RIGHT ANGLE.



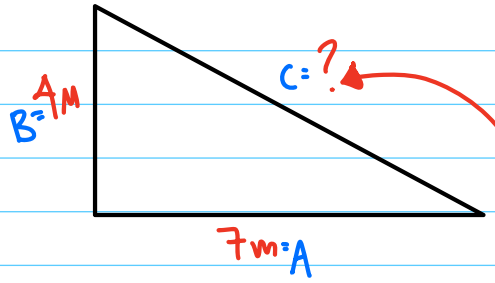
WATCH: PYTHAGOREAN THEOREM EXPLAINED

https://www.youtube.com/watch?v=WqhlG3Vakw8



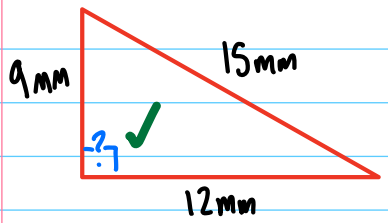
WATCH: PROVING THAT PYTHAG IS A = THING

https://www.youtube.com/watch?v=YompsDlEdtc



$A^2 + B^2 = C^2$
$7^2 + 4^2 = C^2$
$49 + 16 = C^2$
$65 = C^2$
$\sqrt{65} = C$
$\sim 8.1M = C$

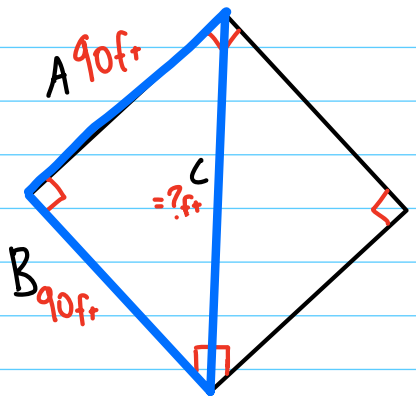
A TRIANGLE HAS SIDE LENGTHS of 9MM, 12MM, AND 15MM. IS IT A RIGHT ANGLE TRIANGLE?



$A^2 + B^2 = C^2$
$9^2 + 12^2 = 15^2$
$81 + 144 = 225$
$225 = 225$

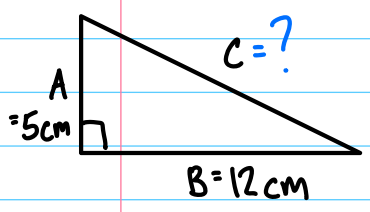
YES. IT IS A RIGHT ANGLE TRIANGLE

A baseball diamond has four right angles and four equal sides. Each side is 90 feet. What is the shortest distance between home plate and second base? Round to the nearest tenth.



$A^2 + B^2 = C^2$
$90^2 + 90^2 = C^2$
$8100 + 8100 = C^2$
$16200 = C^2$
$\sqrt{16200} = C$
$40.249 = C$

THE SHORTEST DISTANCE IS 40.2FT



$A^2 + B^2 = C^2$

$5^2 + 12^2 = C^2$

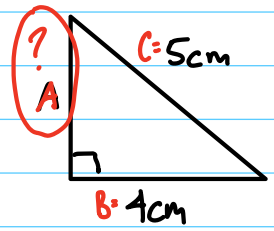
$25 + 144 = C^2$

$169 = C^2$

$\sqrt{169} = C$

$13 = C$

13cm = C



$A^2 + B^2 = C^2$

$A^2 + 4^2 = 5^2$

$A^2 = 5^2 - 4^2$

$A^2 = 25 - 16$

$A^2 = 9$

$A = \sqrt{9}$

A = 3cm

FIND THE LENGTH OF THE MISSING SIDE...

