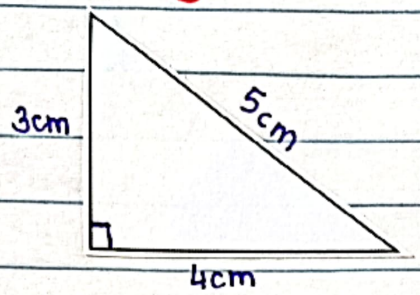
8.3.9
①

# Gr 8 Wiskunde / Mathematics

# Pythagoras

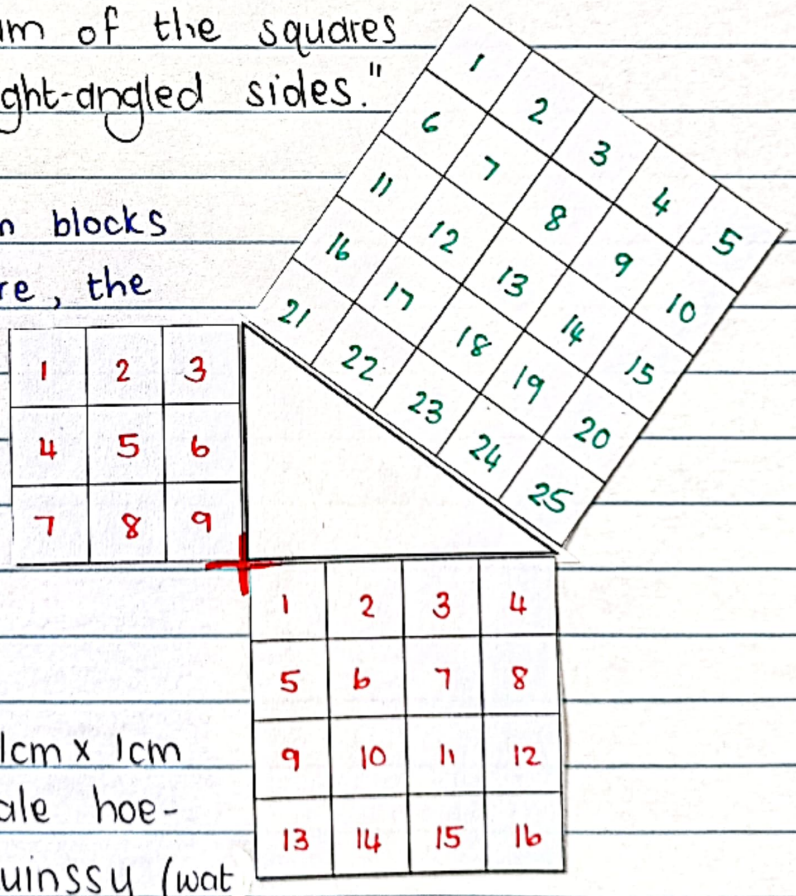



Stelling: "In enige reghoekige driehoek, is die vierkant op die skuinssy gelyk aan die SOM van die vierkante op die reghoek sye"

Theorem: "In any right-angled triangle, the square of the hypotenuse side is equal to the sum of the squares on the right-angled sides."

ENG

If you draw 1cm x 1cm blocks and it forms a square, the total amount of blocks on the hypotenuse will be = to the blocks on the other 2 sides +

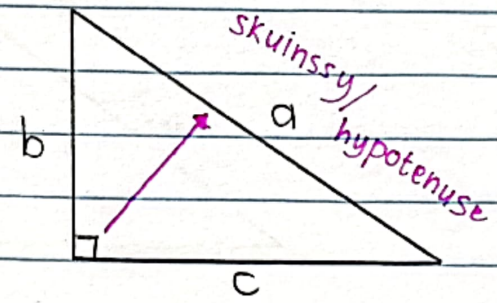



AFR

As jy blokkies van 1cm x 1cm sou trek, sal die totale hoeveelheid op die skuinssy (wat 'n vierkant vorm) gelyk wees aan die totaal van die blokkies op die ander 2 sye

8.3.9
②

• I.p.v elke keer blokkies teken, gebruik ons Pyth.
Instead of drawing blocks every time we use Pyth.

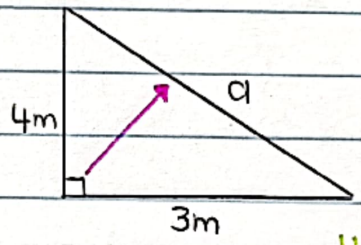



$a^2 = b^2 + c^2$
$b^2 = a^2 - c^2$
$c^2 = a^2 - b^2$

$lang^2 = kort^2 + kort^2$
$kort^2 = lang^2 - kort^2$

$long^2 = short^2 + short^2$
$short^2 = long^2 - short^2$

1.




Rede | Reason

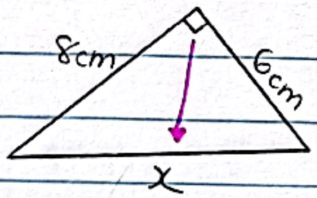
$a^2 = 4^2 + 3^2$ Pythagoras
$a^2 = 16 + 9$
$a^2 = 25$

Hoe kry ons net a (nie $a^2$ nie)
How do we get a (not $a^2$)

$\sqrt{\ }$

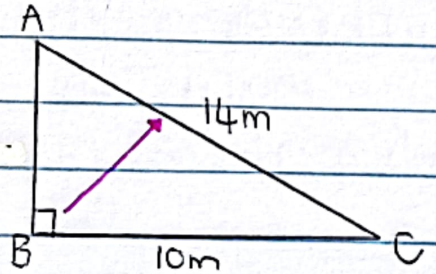
$\sqrt{a^2} = \sqrt{25}$
$a = 5m$

2.




$x^2 = 8^2 + 6^2$ Pythagoras
$x^2 = 64 + 36$
$x^2 = 100$
$\sqrt{x^2} = \sqrt{100}$
$x = 10$

3.




$AB^2 = AC^2 - BC^2$ Pythagoras
$AB^2 = 14^2 - 10^2$
$AB^2 = 96$
$\sqrt{AB^2} = \sqrt{96}$
$AB = 9,8m$