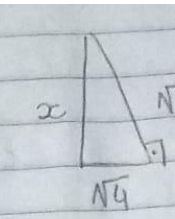
Nome: Gabriely Cristina Silva Santos CTII: 317

TRIÂNGULO RETÂNGULO

01)



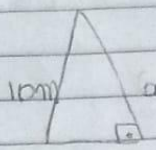
$x^2 = (\sqrt{3})^2 + (\sqrt{4})^2$

$x^2 = 3 + 4$

$x^2 = 7$

$x = \sqrt{7}$ (B)

02)



$x^2 + 6^2 = 10^2$

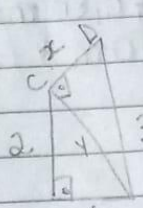
$x^2 + 36 = 100$

$x^2 = 100 - 36$

$x^2 = \sqrt{64}$

$x = 8m$

03)



$y^2 = 2^2 + 1^2$

$y^2 = 4 + 1$

$y^2 = 5$

$y = \sqrt{5}$

$x^2 = 3^2 - (\sqrt{5})^2$

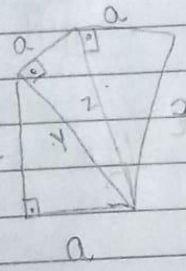
$x^2 = 9 - 5$

$x^2 = 4$

$x = \sqrt{4}$

$x = 2$ (B)

04)



$y^2 = a^2 + a^2$

$y^2 = 2a^2$

$y = a\sqrt{2}$

$z^2 = a^2 + (a\sqrt{2})^2$

$z^2 = a^2 + 2a^2$

$z^2 = 3a^2$

$z = \sqrt{3a^2}$

$z = a\sqrt{3}$

$x^2 = a^2 + (a\sqrt{3})^2$

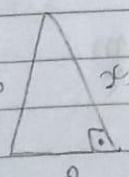
$x^2 = a^2 + 3a^2$

$x^2 = 4a^2$

$x = \sqrt{4a^2}$

$x = 2a$ (B)

05)



$6^2 = 2^2 + x^2$

$36 = 4 + x^2$

$36 - 4 = x^2$

$32 = x^2$

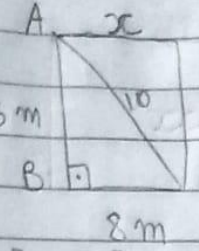
$32 = x$

32	2
16	2
8	2
4	2
2	2
1	

$4\sqrt{2}$

Área = $\frac{b.h}{2} \rightarrow \frac{2.(4\sqrt{2})}{2} = \frac{8\sqrt{2}}{2} = \boxed{4\sqrt{2}}$ c)

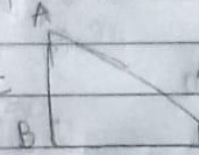
06)



$x^2 = 6^2 + 8^2$
$x^2 = 36 + 64$
$x^2 = 100$
$x = 10$

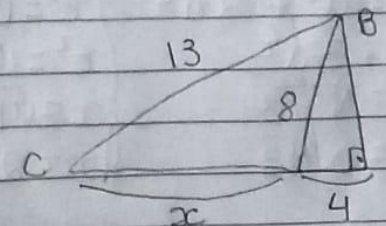
$10^2 = x^2 + (2x)^2$
$100 = 5x^2$
$x = \sqrt{20}$
$x = 2\sqrt{5}$ (A)

07) Após 5 segundos de início do movimento:
Aranha: 5.16 cm = 80 cm = 0,80 m → 2,00 m - 0,80 m = 1,20 m
Formiga: 5.10 cm = 50 cm = 0,50 m



$x^2 = 1,20^2 + 0,50^2$
$x^2 = 1,44 + 0,25$
$x^2 = 1,69$
$x = \sqrt{1,69}$
$x = 1,3$ m (B)

08)



$13^2 = (4+x)^2 + (4\sqrt{3})^2$
$169 = 16 + 8x + x^2 + 48$
$169 = 64 + 8x + x^2$
$x^2 + 8x + 64 = 169$
$x^2 + 8x + 64 - 169 = 0$

$8^2 = 4^2 + x^2$
$64 = 16 + x^2$
$64 - 16 = x^2$
$48 = x^2$
$\sqrt{48} = x$
$x = 4\sqrt{3}$ m

$x^2 + 8x - 105 = 0$ $\quad \Delta = 8^2 - 4.1.(-105)$ (11

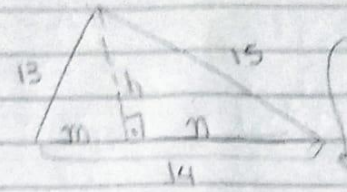
$\Delta = 64 + 420$

$\Delta = 484$

$x = \frac{-8 \pm \sqrt{484}}{2.1} = x' = \frac{-8+22}{2} = +15$

$x'' = \frac{-8-22}{2} = \boxed{-7}$ m. (D)

9)



$15^2 = h^2 + n^2$

$13^2 = h^2 + m^2$

$225 - 169 = n^2 - m^2$

$n + m = 14$

$225 - 169 = n^2 - m^2$

$56 = (n+m).(n-m)$

$56 = 14.(n-m)$

$n - m = \frac{56}{14} = 4$

$+ \quad n + m = 14$

$n - m = 4$

$2n = 18$

$n = 18/2 = 9$

$15^2 = h^2 + n^2$

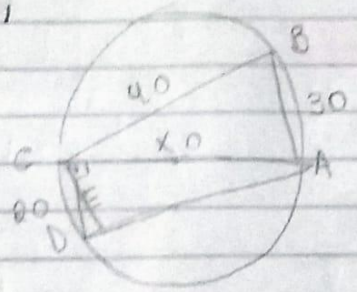
$15^2 = h^2 + 9^2$

$h^2 = 225 - 81$

$h = \sqrt{144}$

$\boxed{h = 12}$

11)



$c^2 = a.n$

$20^2 = 50.n$

$400 = 50n$

$n = \frac{400}{50}$

$\boxed{n = 8}$ (C)

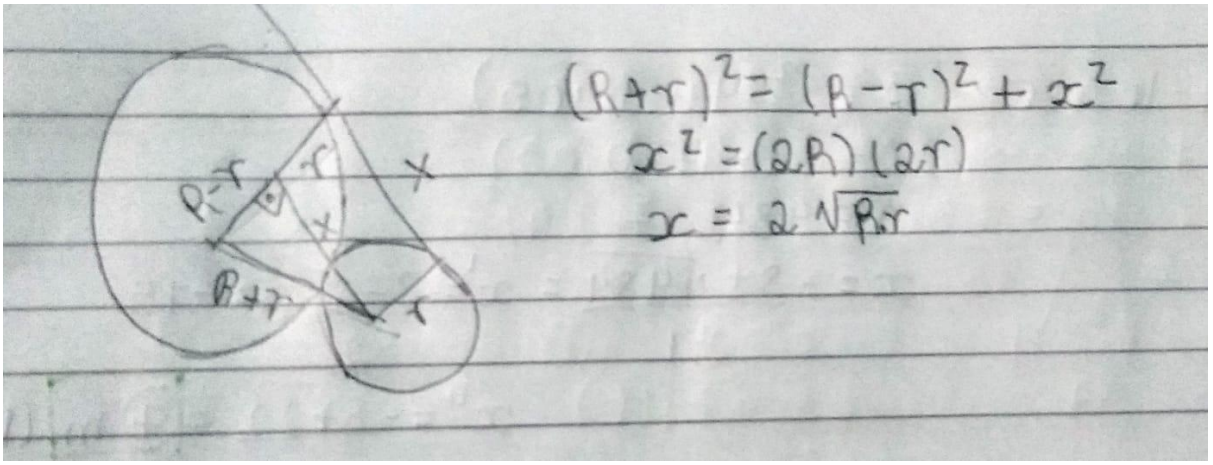
$x^2 = 40^2 + 30^2$

$x^2 = 1600 + 900$

$x^2 = \sqrt{2500}$

$x = 50 \rightarrow$ hipotenusa do ΔABC

10)



$$(R+r)^2 = (R-r)^2 + x^2$$

$$x^2 = (2R)(2r)$$

$$x = 2\sqrt{Rr}$$