Aula 07/06/21

07/06/2

Triângulo Retângulo
Tripla Básica

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

$8^2 = (\sqrt{3})^2 + (\sqrt{a})^2$

$a^2 = 3 + 4$

$a^2 = 7$

$a = \sqrt{7}$

Alt (B)

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

$10^2 = b^2 + 6^2$

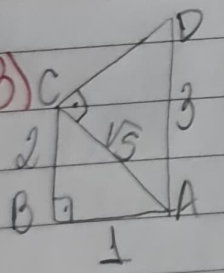
$100 - 36 = b^2$

$b^2 = 64$

$b = 8$

Resposta = 8 m

03)



p/ calcular $\overline{AC}$

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

$a^2 = 2^2 + 1^2$

$a^2 = 4 + 1$

$a = \sqrt{5}$

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

$3^2 = b^2 + (\sqrt{5})^2$

$b^2 = 9 - 5$

$b = 2$

Resp: (B)

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

$x^2 = 5^2 + 5^2$

$x = 5 + 5$

$x = 2 \cdot 5$ por semelhança

Alt (B)

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

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

$36 - 4 = c^2$

$c = \sqrt{32}$

32	2
16	2
8	2
4	2
2	2
1	

$4\sqrt{2}$

Área $\Delta = \frac{b \cdot c}{2}$

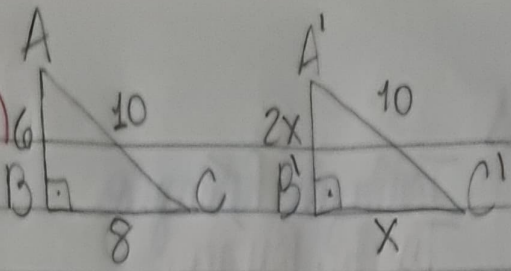
$= \frac{2 \cdot 4\sqrt{2}}{2}$

$= \frac{8\sqrt{2}}{2} \sim 4\sqrt{2}$

Alt (C)

04/06/21

06)



$a^2 = b^2 + c^2$
$a^2 = 6^2 + 8^2$
$a^2 = 100$
$a = 10m$

$a^2 = b^2 + c^2$
$10^2 = (2x)^2 + (x)^2$
$100 = 4x^2 + x^2$
$5x^2 = 100$

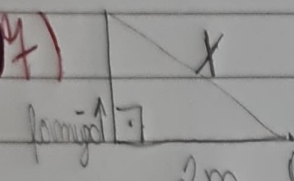
$x = \sqrt{20}$
$x = 2\sqrt{5}$

20	2
10	2
5	5
1	

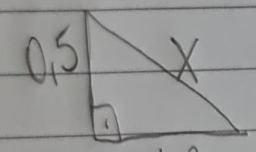
$2\sqrt{5}$

Alt (A)

07)



árvore $16cm / 2 = 16 \cdot 5 = 80cm = 0,8m$
formiga $10cm / 2 = 10 \cdot 5 = 50cm = 0,5m$



$2m - 0,8 = 1,2m$

$x^2 = b^2 + c^2$
$x^2 = (0,5)^2 + (1,2)^2$
$x^2 = 0,25 + 1,44$
$x^2 = 1,69$
$x = 1,3m$

Alt (B)

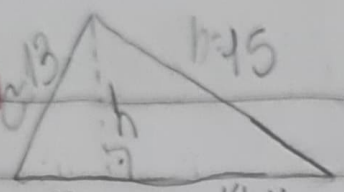
08) $a^2 = b^2 + c^2$ p/ lado $\overline{AB}$
$8^2 = b^2 + (4)^2$
$64 = b^2 + 16$
$b = \sqrt{48}$

$a^2 = b^2 + c^2$
$13^2 = (x+4)^2 + (\sqrt{48})^2$
$169 = x^2 + 8x + 16 + 48$
$x^2 + 8x - 105 = 0$

$\Delta = b^2 - 4ac$
$\Delta = 8^2 - 4 \cdot 1 \cdot -105$
$\Delta = 484$

$x = \frac{-b \pm \sqrt{\Delta}}{2a}$
$x = \frac{-8 + 22}{2} = \frac{14}{2} = 7$

Largura $= 7m$ Alt (D)

09) 

Ⅰ $x^2+h^2=13^2$ | Ⅱ $h^2+(14-x)^2=15^2$

$h^2=13^2-x^2$ | $h^2=15^2-(14-x)^2$

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Ⅰ=Ⅱ

$13^2-x^2=15^2-(14-x)^2$

$169-x^2=225-(196-28x+x^2)$

$169-x^2=225-196+28x-x^2$

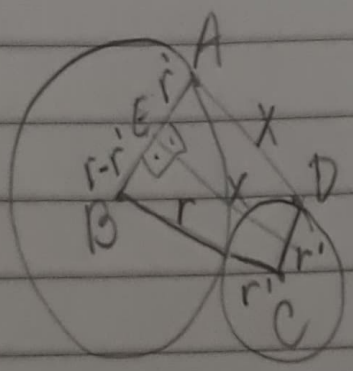
$x=5$

$14-5=9$

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

$h^2=15^2-9^2$

$h=12$

10) 

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

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

$r^2+2rr'+r'^2=x^2+r^2-2rr'(-r')^2$

$x^2=r^2+2rr'+r'^2-r^2+2rr'-r'^2$

$x^2=4rr'$

$x^2=2^2 r.r'$

$x=2\sqrt{rr'}$

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

$(x+y)^2=30^2+40^2$

$(x+y)^2=900+1600$

$(x+y)=50$

$20/(x+y)=y/20$

$20^2=(x+y).y$

$400=50y$

$y=8$

Resp: (C) $CE=8$