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CTII 317

Triângulo Retângulo



Triângulo Retângulo

01- $a^2 = (\sqrt{3})^2 + (\sqrt{4})^2$

$$a^2 = 3 + 4$$

$$a^2 = 7$$

$$a = \sqrt{7}$$

A hipotenusa mede 7.

Letra B

02- A escada forma um triângulo equilátero de catetos iguais a 6m e x e hipotenusa igual a 10m.

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

$$x^2 + 36 = 100$$

$$x^2 = 100 - 36$$

$$x = \sqrt{64}$$

$$x = 8m$$

03- Determinar a medida de AC, que é a hipotenusa do triângulo ABC.

$$(AC)^2 = 2^2 + 1^2$$

$$(AC)^2 = 4 + 1$$

$$(AC)^2 = 5$$

$$AC = \sqrt{5}$$

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

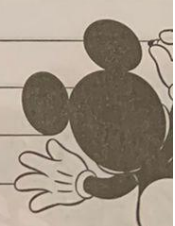
$$(CD)^2 = 9 - 5$$

$$(CD)^2 = 4$$

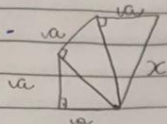
$$CD = \sqrt{4}$$

$$CD = 2$$

Letra B



04-



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

$$xy^2 = a^2 + a^2$$

$$xy^2 = 2a^2$$

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

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

$$z^2 = 3a^2$$

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

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

$$x^2 = 4a^2$$

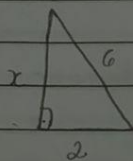
$$x = \sqrt{4a^2}$$

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

$$x = 2a$$

Yitua B

05-



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

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

$$36 = x^2 + 4$$

$$36 - 4 = x^2$$

$$x^2 = 32$$

$$x = \sqrt{32}$$

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

$$A? A = b \cdot h$$

$$2$$

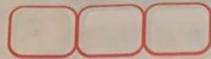
$$A = \cancel{2} \cdot 4\sqrt{2}$$

$$\cancel{2}$$

$$A = 4\sqrt{2}$$

Yitua C





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

$$u_y^2 = 6^2 + 8^2$$

$$u_y^2 = 36 + 64$$

$$u_y^2 = 100$$

$$u_y = \sqrt{100}$$

$$u_y = 10$$

$$10^2 = x^2 + (2x)^2$$

$$100 = x^2 + 4x^2$$

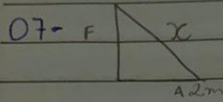
$$100 = 5x^2$$

$$x^2 = 20$$

$$x = \sqrt{20}$$

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

Letra A



$$\text{varanda} = 5.16 = 80 \text{ cm} \rightarrow 0,80 \text{ m}$$

$$2 \text{ m} + 2,00 - 0,80 = 1,20 \text{ m}$$

$$\text{formiga} = 5.10 = 50 \text{ cm} = 0,50 \text{ m}$$

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

$$x^2 = 1,20^2 + 0,50^2$$

$$x^2 = 1,44 + 0,25$$

$$x^2 = 1,69$$

$$x = \sqrt{1,69}$$

$$x = 1,3 \text{ m}$$

Letra B

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

$$8^2 = u_y^2 + 4^2$$

$$64 = u_y^2 + 16$$

$$64 - 16 = u_y^2$$

$$u_y^2 = 48$$

$$u_y = \sqrt{48}$$

$$u_y = 4\sqrt{3}$$

$$13^2 = (x+4)^2 + (4\sqrt{3})^2$$

$$169 = x^2 + 8x + 16 + 48$$

$$x^2 + 8x + 64 - 169 = 0$$

$$x^2 + 8x - 105 = 0$$

$$a = 1, b = 8, c = -105$$

$$\Delta = b^2 - 4 \cdot a \cdot c$$



$$10- x^2 = (r+r')^2 - (r-r')^2$$

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

$$x^2 = 4rr' \rightarrow x = \sqrt{4rr'}$$

$$x = 2\sqrt{rr'}$$

$$11- h^2 = 30^2 + 40^2$$

$$h^2 = 900 + 1600$$

$$h^2 = 2500$$

$$h = 50 = CA$$

$$b^2 = an \text{ ou } cd^2 = CA \cdot CE$$

$$\rightarrow 20^2 = 50 \cdot n$$

$$400 = 50 \cdot n$$

$$n = 400$$

$$50$$

$$n = 800 \text{ ou } CE = 8$$

Litua C