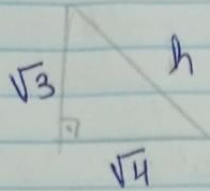


Triângulo Retângulo

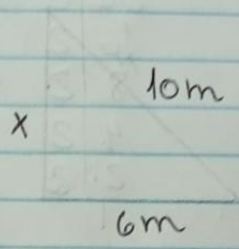
Exercícios 1, 2 e 3

01.


$$A^2 = B^2 + C^2$$
$$h^2 = (\sqrt{3})^2 + (\sqrt{4})^2$$
$$h^2 = 3 + 4$$
$$h^2 = 7$$
$$h = \sqrt{7} //$$

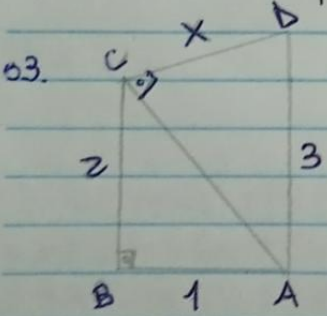
Resposta B

02.


$$A^2 = B^2 + C^2$$
$$10^2 = 6^2 + x^2$$
$$100 = 36 + x^2$$
$$x^2 = 100 - 36$$
$$x^2 = 64$$
$$x = \sqrt{64}$$
$$x = 8m //$$

Resposta 8m

03.


$$A^2 = B^2 + C^2$$
$$AC^2 = 2^2 + 1^2$$
$$AC^2 = 4 + 1$$
$$AC^2 = 5$$
$$AC = \sqrt{5}$$
$$A^2 = B^2 + C^2$$
$$CD^2 = 3^2 - (\sqrt{5})^2$$
$$CD^2 = 9 - 5$$
$$CD^2 = 4$$
$$CD = \sqrt{4}$$
$$CD = 2 //$$

Resposta B

Exercício 4 e 5

04.

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

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

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

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

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

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

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

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

$$x = 2a \text{ Resposta B}$$

05.

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

$$6^2 = B^2 + 2^2$$

$$36 = B^2 + 4$$

$$B^2 = 36 - 4$$

$$B^2 = 32$$

$$B = \sqrt{32}$$

32	2	$2^2 \cdot 2^2 \cdot 2$
16	2	$4^2 \sqrt{2}$
8	2	
4	2	$A = B \cdot h/2$
2	2	$A = 2 \cdot (4\sqrt{2})/2$
1	2	$A = 8 \cdot \sqrt{2}/2$
		$A = 4\sqrt{2}$

Resposta C

Exercício 6

06.

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

$$A^2 = 8^2 + 6^2$$

$$A^2 = 64 + 36$$

$$A = \sqrt{100}$$

$$A = 10$$

$$10^2 = H^2 + (6-x)^2$$

$$100 = H^2 + 36 - 12x + x^2$$

$$100 = H^2 + x^2 - 12x + 36$$

$$-H^2 = x^2 - 12x - 64$$

$$H^2 = -x^2 + 12x + 64$$

$$8^2 = H^2 + x^2$$

$$64 = -x^2 + 12x - 64 + x^2$$

$$64 = 12x - 64$$

$$12x = -128$$

$$x = 128/12$$

$$x = -10,6$$

$$H^2 = -10,6^2 + 12 + 64$$

$$H^2 = 112,36 + 12$$

$$H^2 = 303,56$$

$$H^2 = \sqrt{303,56}$$

$$H = 2\sqrt{5} //$$

Exercícios 7 e 8

07. Aranha

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

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

Ferrniga

$$5.10 \text{ cm} = 0,5 \text{ m}$$

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

$$A^2 = 1,2^2 + 0,5^2$$

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

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

$$A = 1,30 \text{ m}$$

08.

AB

$$8^2 = 4^2 + x^2$$

$$x^2 = 64 - 16$$

$$x = \sqrt{48}$$

$$\Delta = B^2 - 4 \cdot A \cdot C$$

$$\Delta = 64 - 4 \cdot 1 \cdot (-165)$$

$$\Delta = 484$$

$$48 \mid 2$$

$$24 \mid 2 \quad x = 4\sqrt{3}$$

$$12 \mid 2$$

$$6 \mid 2$$

$$3 \mid 3$$

$$1 \mid$$

$$x' = \frac{-8 + 22}{2 \cdot 1} = 7 //$$

$$x'' = \frac{-8 - 22}{2 \cdot 1} = -15$$

Resposta D

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

$$169 = x^2 + 8x + 16 + 16 \cdot 3$$

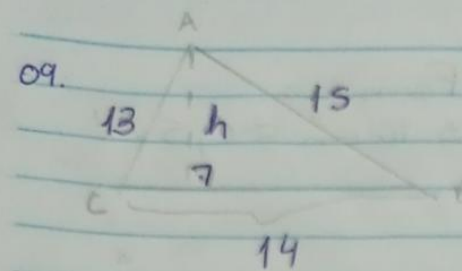
$$169 = x^2 + 8x + 64$$

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

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

Exercícios 9, 10 e 11

09.



$$H^2 = -(5)^2 + 28(5) + 29$$

$$H^2 = 25 + 140 + 29$$

$$H^2 = 194$$

$$H = \sqrt{194}$$

$$H = 12 \dots$$

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

$$15^2 + H^2 + (14-x)^2$$

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

$$-H^2 = x^2 - 28x - 29$$

$$H^2 = -x^2 + 28x + 29$$

$$13^2 = H^2 + x^2$$

$$169 = H^2 + x^2$$

$$169 = -x^2 + 28x + 29 + x^2$$

$$169 = 28x + 29$$

$$140 = 28x$$

$$x = 140/28$$

$$x = 5$$

10.

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

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

$$x^2 = 4rr'$$

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

11. AC CE

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

$$AC^2 = 40^2 + 30^2$$

$$AC^2 = 1600 + 900$$

$$AC^2 = 2500$$

$$AC = \sqrt{2500}$$

$$AC = 50$$

$$C^2 = A \cdot N$$

$$20^2 = 50 \cdot N$$

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

$$N = 8$$

Resposta C