

Breathig Gonçalves Eleuterio

• Triângulo Retângulo

$$\textcircled{1} \quad x^2 = (\sqrt{3})^2 + (\sqrt{4})^2$$

$$x^2 = 3 + 4 \quad \rightarrow \quad x = \sqrt{7}$$

\textcircled{B}

$$\textcircled{2} \quad 10^2 = 6^2 + x^2$$

$$100 = 36 + x^2$$

$$x^2 = 100 - 36$$

$$x^2 = 64$$

$$x = \sqrt{64}$$

$$x = 8 \text{ m}$$

$\textcircled{8 \text{ m}}$

$$\textcircled{3} \quad x^2 = 1^2 + 2^2$$

$$x^2 = 1 + 4$$

$$x^2 = 5$$

$$x = \sqrt{5}$$

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

$$9 = 5 + x^2$$

$$x^2 = 9 - 5$$

$$x^2 = 4$$

$$x = \sqrt{4}$$

$$x = 2$$

\textcircled{B}

$$\begin{array}{lcl}
 \textcircled{4} & x^2 = d^2 + d^2 & x^2 = (d\sqrt{2})^2 + d^2 & x^2 = (d\sqrt{3})^2 + d^2 \\
 & x^2 = 2d^2 & x^2 = 2d^2 + d^2 & x^2 = 3d^2 + d^2 \\
 & x = \sqrt{2d^2} & x^2 = 3d^2 & x^2 = 4d^2 \\
 & x = d\sqrt{2} & x = \sqrt{3d^2} & x = \sqrt{4d^2} \\
 & & x = d\sqrt{3} & x = 2d
 \end{array}$$

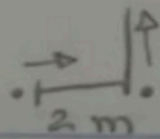
(B)

$$\begin{array}{lcl}
 \textcircled{5} & x^2 + 2^2 = 6^2 & A = \frac{CO \cdot CA}{2} \\
 & x^2 + 4 = 36 & \\
 & x^2 = 36 - 4 & A = \frac{\cancel{2} \cdot 4\sqrt{2}}{\cancel{2}} \\
 & x^2 = 32 & \\
 & x = \sqrt{32} & A = 4\sqrt{2} \\
 & x = 4\sqrt{2} &
 \end{array}$$

(C)

7

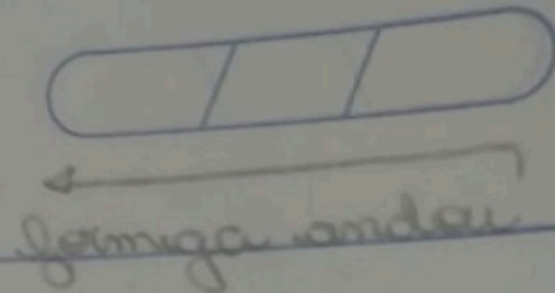
micie



$\frac{16}{\times 5}$
80 cm

varanda andar

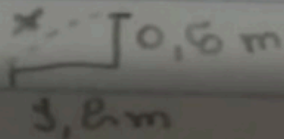
$\frac{10}{\times 5}$
50 cm



ferruga andar

$$200 - 80 = 120 \text{ cm}$$

Calcule



$$x^2 = 120^2 + 50^2$$

$$x^2 = 14400 + 2500$$

$$x = \sqrt{16900}$$

$$x = 130 \rightarrow 13 \text{ m}$$

8

$$\textcircled{8} \quad 8^2 = 4^2 + x^2$$

$$x^2 = 64 - 16$$

$$x = \sqrt{48}$$

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

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

$$169 = 16 \cdot 3 + x^2 + 2x \cdot 4 + 4^2$$

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

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

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

$$x = \frac{-8 \pm \sqrt{484}}{2 \cdot 1}$$

$$x = \frac{-8 \pm 22}{2}$$

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

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

$$\Delta = 8^2 - 4 \cdot 1 \cdot (-105)$$

$$\Delta = 64 + 420$$

$$\Delta = 484$$

①

$x = 7$ (pois o valor de um cateto não pode ser maior que a hipotenusa)