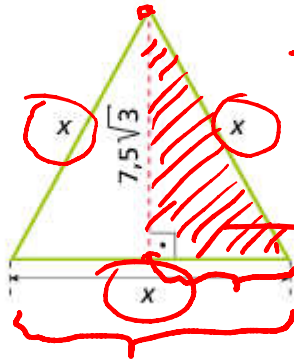


f)



Triângulo Equilátero

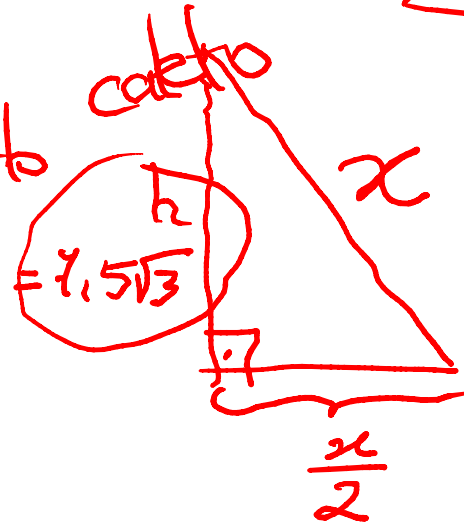
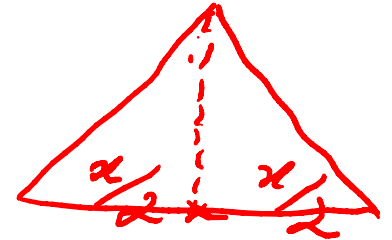
Triângulo Retângulo

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

$$x^2 = (7,5\sqrt{3})^2 + \left(\frac{x}{2}\right)^2$$

$$x^2 = 7,5^2 \cdot \underline{\underline{3}} + \frac{x^2}{2^2}$$

$$x^2 = 56,25 \cdot 3 + \frac{x^2}{4}$$



3	7,5	56,25
x	7,5	x 3
375		168,75
525		
56,25		

$$\frac{4}{x^2} = \frac{4}{168,75} + \frac{1}{4} \quad \text{mmc} = 4$$

$$4x^2 = 675 + x^2$$

$$4x^2 - x^2 = 675$$

$$3x^2 = 675$$

$$x^2 = \frac{675}{3}$$

$$x^2 = 225 \rightarrow x = \sqrt{225}$$

$x = 15$

$$\begin{array}{r} 2 \quad 3 \quad 3 \quad 2 \\ 168,75 \\ \times \quad 4 \\ \hline 675,00 \end{array}$$

$$\begin{array}{r} 225 \overline{) 3} \quad (3) \\ 75 \overline{) 3} \\ 25 \overline{) 5} \quad (5) \\ 5 \overline{) 5} \\ 1 \end{array}$$

$$\begin{array}{r} 6'7'5' \overline{) 3} \\ 07'5' \\ 15' \\ 0 \end{array}$$

Aplicações do Teorema de Pitágoras

Ex: Calcular a diagonal de um quadrado de 6m de lado.

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

$$d^2 = 6^2 + 6^2$$

$$d^2 = 36 + 36$$

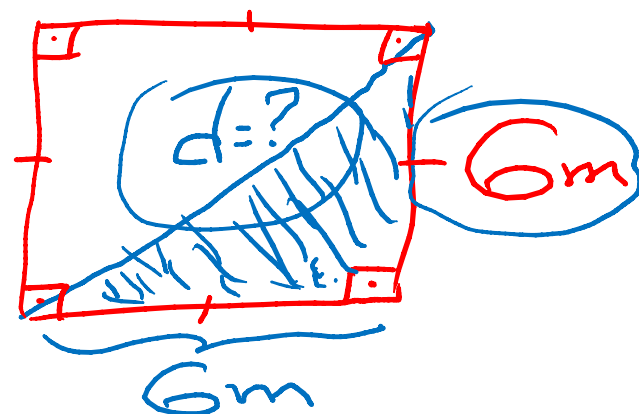
$$d^2 = 72$$

$$d = \sqrt{72}$$

$$d = 6\sqrt{2} \text{ m}$$

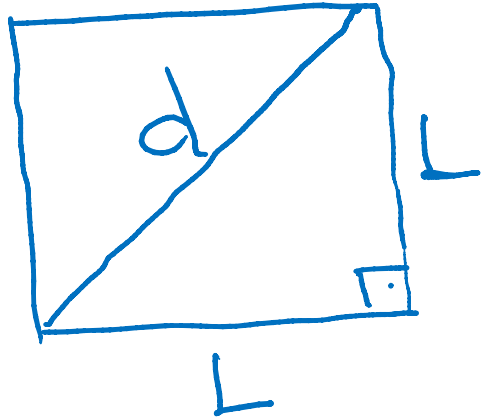
$$\begin{array}{r|l} 2 & 2 \\ 36 & 2 \\ 18 & 2 \\ 9 & 2 \\ 3 & 2 \\ 1 & 2 \end{array}$$

$$d = 8,484 \text{ m}$$



$$\sqrt{2} = 1,414$$

$$\begin{array}{r} 1,414 \\ \times 6 \\ \hline 8,484 \end{array}$$



Literal

Pitágoras:

$$d^2 = \underbrace{L^2 + L^2}$$

$$d^2 = 2L^2$$

$$d = \sqrt{2L^2} = \sqrt{2} \cdot \underbrace{\sqrt{L^2}}$$

Quadrado
de lado 6m.

$$d = L\sqrt{2}$$

$$d = 6\sqrt{2} \text{ m}$$

Outra aplicação :



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

$$10^2 = h^2 + 5^2$$

$$100 = h^2 + 25$$

$$100 - 25 = h^2$$

$$75 = h^2$$

$$h = \sqrt{75}$$

$$h = 5\sqrt{3} \text{ m}$$

$$\begin{array}{r|l} 75 & 3 \\ 25 & 5 \\ 5 & 5 \\ 1 & \end{array}$$