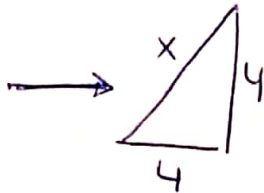
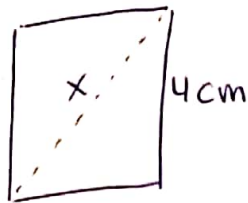


1- a)

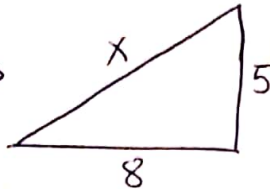
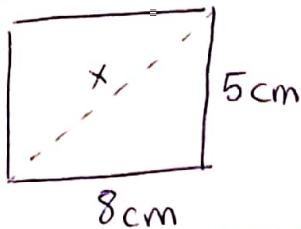


$$x^2 = 4^2 + 4^2$$

$$x^2 = 16 + 16 = 32$$

$$x = \sqrt{32} = 5'66 \text{ cm}$$

b)

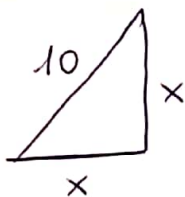
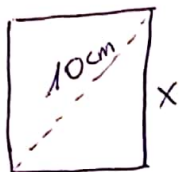


$$x^2 = 5^2 + 8^2$$

$$x^2 = 25 + 64 = 89$$

$$x = \sqrt{89} = 9'43 \text{ cm}$$

c)



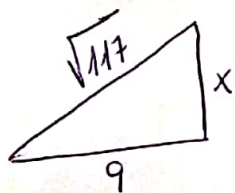
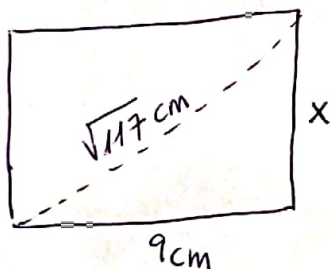
$$10^2 = x^2 + x^2$$

$$100 = 2x^2$$

$$\frac{100}{2} = x^2 \Rightarrow x^2 = 50$$

$$x = \sqrt{50} = 7'07 \text{ cm}$$

d)

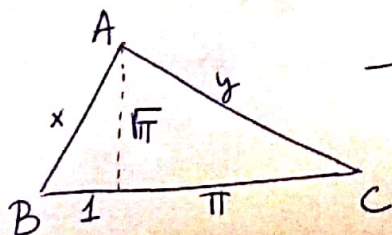


$$(\sqrt{117})^2 = x^2 + 9^2$$

$$117 = x^2 + 81 \Rightarrow$$

$$\Rightarrow x^2 = 36 \Rightarrow x = 6 \text{ cm}$$

2- Si ese triángulo cumple el teorema de Pitágoras, entonces es un triángulo rectángulo



→ Calculamos x aplicando el teorema de Pitágoras:

$$x^2 = 1^2 + (\sqrt{\pi})^2 \Rightarrow x^2 = 1 + \pi \Rightarrow x = \sqrt{1 + \pi}$$

→ Ahora hagamos lo mismo para calcular y:

$$y^2 = (\sqrt{\pi})^2 + \pi^2 \Rightarrow y^2 = \pi + \pi^2 \Rightarrow y = \sqrt{\pi + \pi^2}$$

Veamos ahora si nuestro triángulo cumple el teorema de Pitágoras: $x^2 + y^2 = (1 + \pi)^2$? $\Rightarrow (\sqrt{1 + \pi})^2 + (\sqrt{\pi + \pi^2})^2 = (1 + \pi)^2$? \Rightarrow

$$\Rightarrow 1 + \pi + \pi + \pi^2 = 1 + 2\pi + \pi^2 \Rightarrow 1 + 2\pi + \pi^2 = 1 + 2\pi + \pi^2 \quad \checkmark$$