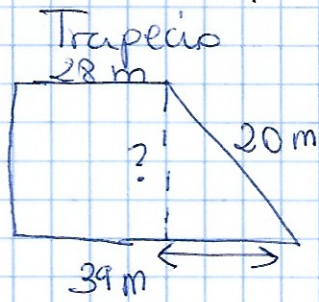
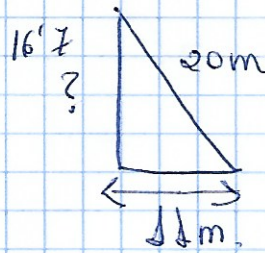


Pitágoras en figuras planas.



$$39 - 28 = \Delta 11m$$



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

$$20^2 = 11^2 + x^2$$

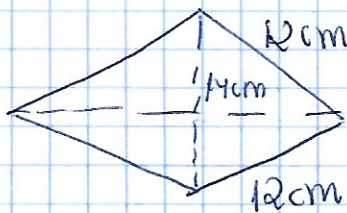
$$400 = 121 + x^2$$

$$x^2 = 400 - 121$$

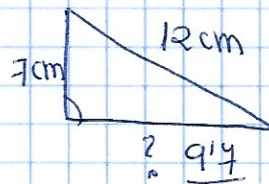
$$x^2 = 279$$

$$x \sqrt{279} = \underline{16'7}$$

Rombo



$$\frac{14 \times 12}{07}$$



$$h^2 = 7^2 + x^2$$

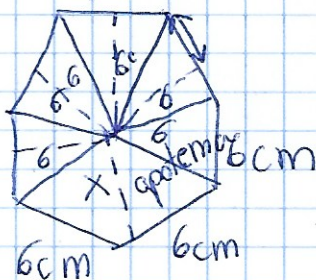
$$12^2 = 49 + x^2$$

$$144 = 49 + x^2$$

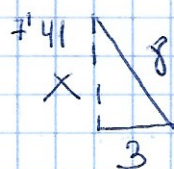
$$x^2 = 144 - 49 = 95$$

$$x \sqrt{95} = 9'4$$

Heptágono



$$6 - 3 = \boxed{3}$$



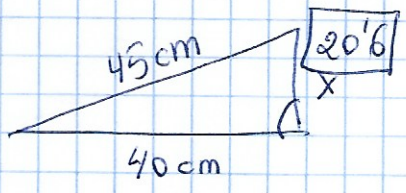
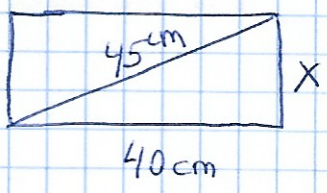
$$h^2 = 3^2 + x^2$$

$$8^2 = 9 + x^2$$

$$64 = 9 + x^2$$

$$x^2 = 64 - 9 = 55$$

Rectángulo



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

$$45^2 = 40^2 + b^2$$

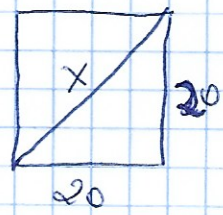
$$2025 = 1600 + b^2$$

$$b^2 = 2025 - 1600$$

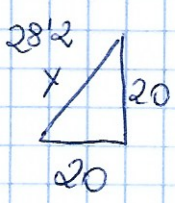
$$b^2 = 425$$

$$b \sqrt{425} = 20'6 \sim 21$$

Cuadrado



$$h^2 = 20^2 + 20^2$$



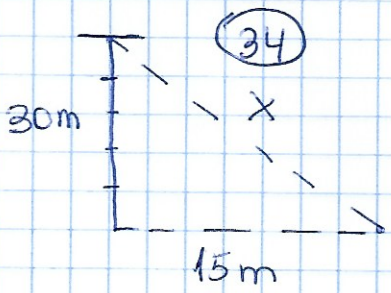
$$h^2 = 400 + 400$$

$$h^2 = 800$$

$$h \sqrt{800} = 28'2 \sim 28$$

Problema

Colocamos un cable desde la cima de un poste de 30 metros de altura hasta un punto situado a 15 metros del poste. ¿Cuánto mide el cable?



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

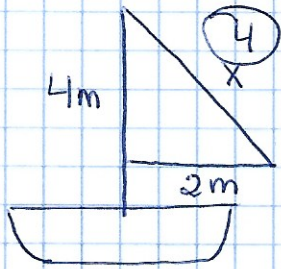
$$h^2 = 15^2 + 30^2$$

$$h^2 = 225 + 900$$

$$h^2 = 1125$$

$$h \sqrt{1125} = 33'5 \sim 34$$

Una vela de un barco tiene 4m de alto. La base mide 2, ¿cuánto mide el otro lado de la vela?



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

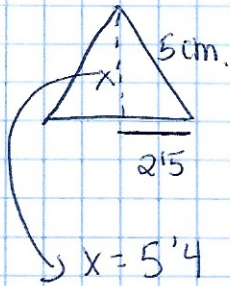
$$x^2 = 4^2 + 2^2$$

$$x^2 = 16 + 4$$

$$x^2 = 20$$

$$x\sqrt{20} = 4.47 \approx 4$$

Calcula el área de un triángulo rectángulo de 5cm de lado



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

$$h^2 = 5^2 + (2.5)^2$$

$$h^2 = 25 + 5$$

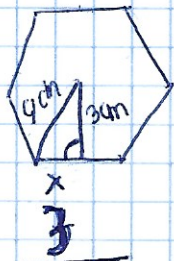
$$h^2 = 30$$

$$h = 30 = 5.4$$

$$a = \frac{b \cdot h}{2}$$

$$a = \frac{5 \cdot 5.4}{2} = \frac{27}{2} = 13.5 \approx \boxed{14 \text{ cm}^2}$$

Calcula el área de un hexágono de 3cm de apotema y un radio de 4cm.



Estado

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

$$4^2 = 3^2 + x^2$$

$$16 = 9 + x^2$$

$$x^2 = 16 - 9 = 7 \quad x\sqrt{7} = 2.6 \approx 3$$

$$\text{Perímetro} = 6 \cdot 6 = 36 \text{ cm}$$

$$A = \frac{P \cdot a}{2} = \frac{36 \cdot 3}{2} = \frac{108}{2} = 54$$

$$\boxed{54 \text{ cm}^2}$$