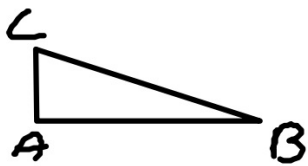




$$BC^2 = AB^2 + CA^2$$

$$BC = \sqrt{AB^2 + CA^2}$$

- IL QUADRATO E EQUIVALENTE
ALLA SOMMA DEI QUADRATI
- L'AREA DEL QUADRATO E UGUALE
ALLA SOMMA DELLE AREE



$$\begin{array}{l} \text{D} \\ AB + AC = 124 \text{ cm} \\ AB - AC = 68 \text{ cm} \end{array} \left| \begin{array}{l} P \\ A \end{array} \right.$$

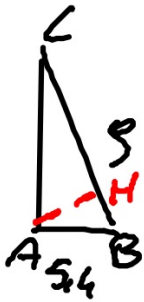
$$AB = \frac{1+1}{2} = \frac{124+68}{2} = \frac{192}{2} = 96 \text{ cm}$$

$$AC = \frac{1-1}{2} = \frac{124-68}{2} = \frac{56}{2} = 28 \text{ cm}$$

$$BC = \sqrt{AB^2 + AC^2} = \sqrt{96^2 + 28^2} = \sqrt{9216 + 784} = \sqrt{10000} = 100 \text{ cm}$$

$$P = AB + BC + CA = 96 + 100 + 28 = 224 \text{ cm}$$

$$A = \frac{AB \cdot AC}{2} = \frac{96 \cdot 28}{2} = 1344 \text{ cm}^2$$



$$\begin{array}{l} BC - AB = 3,6 \text{ cm} \\ BC = \frac{5}{3} AB \end{array} \quad \left| \begin{array}{l} P \\ A \end{array} \right.$$

$$\begin{aligned} BC : AB &= 5 : 3 \\ (BC - AB) : BC &= (5 - 3) : 5 \end{aligned}$$

$$3,6 : BC = 2 : 5$$

$$BC = \frac{3,6 \cdot 5}{2} = 9 \text{ cm}$$

$$AB = BC - (BC - AB) = 9 - 3,6 = 5,4 \text{ cm}$$

$$U = (BC - AB) : 2 = 3,6 : 2 = 1,8 \text{ cm}$$

$$AB = U \cdot 3 = 1,8 \cdot 3 = 5,4 \text{ cm}$$

$$BC = U \cdot 5 = 1,8 \cdot 5 = 9 \text{ cm}$$

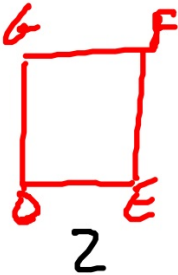
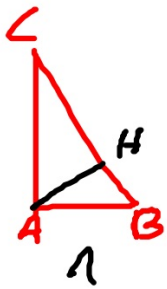
$$AC = \sqrt{BC^2 - AB^2} = \sqrt{9^2 - 5,4^2} =$$

$$= \sqrt{81 - 29,16} = \sqrt{51,84} = 7,2 \text{ m}$$

$$P = AB + BC + CA = 5,4 + 9 + 7,2 = 21,6 \text{ m}$$

$$A = \frac{AB \cdot AC}{2} = \frac{5,4 \cdot 7,2}{2} = \frac{38,88}{2} = 19,44 \text{ m}^2$$

$$AH = \frac{2 \cdot A}{BC} = \frac{2 \cdot 19,44}{9} = 12,56 : 3 = 4,18 \text{ m}$$



$$\begin{array}{l}
 AC - AB = 4,2 \\
 AC = AB + 4,2 \text{ cm} \\
 AC + AB = 13,8 \text{ cm} \\
 P_1 \approx P_2
 \end{array}
 \left| A_2
 \right.$$

$$AC = \frac{1+2}{2} = \frac{13,8+4,2}{2} = \frac{18}{2} = 9 \text{ cm}$$

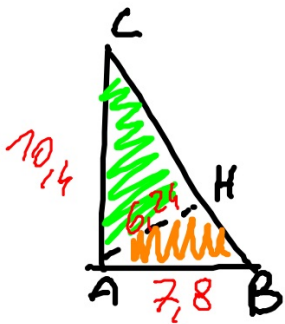
$$AB = \frac{1-2}{2} = \frac{13,8-4,2}{2} = \frac{9,6}{2} = 4,8 \text{ cm}$$

$$BC = \sqrt{AB^2 + AC^2} = \sqrt{4,8^2 + 9^2} = \sqrt{23,04 + 81} = \sqrt{104,04} = 10,2 \text{ cm}$$

$$P_1 = AB + BC + AC = 4,8 + 10,2 + 9 = 24 \text{ cm}$$

$$EF = P_2 : 4 = 24 : 4 = 6 \text{ cm}$$

$$A_2 = EF^2 = 6^2 = 36 \text{ cm}^2$$



AH → Altezza relativa all'ipotenusa

BH }
CH } → Proiezioni dei cateti sull'ipotenusa

| | |
|-------------|----|
| AB = 7,8 cm | AH |
| BC = 13 cm | BH |
| | CH |

$$AC = \sqrt{BC^2 - AB^2} = \sqrt{13^2 - 7,8^2} =$$

$$\sqrt{169 - 60,84} = \sqrt{108,16} = 10,4 \text{ cm}$$

$$A = \frac{AB \cdot AC}{2} = \frac{7,8 \cdot 10,4}{2} = 40,56 \text{ cm}^2$$

$$AH = \frac{A \cdot 2}{BC} = \frac{2 \cdot 40,56}{13} = 6,24 \text{ cm}$$

$$8,32 + 4,68 = 13$$

$$CH = \sqrt{AC^2 - AH^2} = \sqrt{10,4^2 - 6,24^2} = \sqrt{108,16 - 38,93} = \sqrt{69,23} = 8,32 \text{ cm}$$

$$BH = \sqrt{AB^2 - AH^2} = \sqrt{7,8^2 - 6,24^2} = \sqrt{60,84 - 38,93} = \sqrt{21,91} = 4,68 \text{ cm}$$