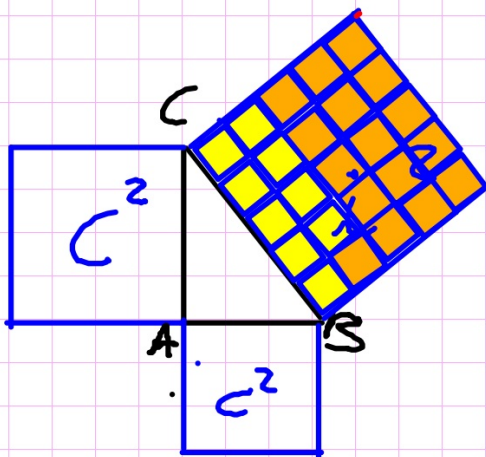


TEOREMA DI PITAGORA

IL QUADRATO COSTRUITO SULL'IPOTENUSA È EQUIVALENTE ALLA SOMMA DEI QUADRATI COSTRUITI SUI DUE CATETI



$$i^2 = c^2 + c^2$$

$$\sqrt{i^2} = \sqrt{c^2 + c^2}$$

$$i = \sqrt{c^2 + c^2}$$



$$\overline{AB} = \frac{3}{4} \overline{AC}$$

$$\hat{A} = 90^\circ$$

$$\overline{AB} + \overline{CA} = 28$$

$$\overline{CA} = \frac{4}{3} \overline{AB}$$

2p

$$\overline{AB} : \overline{CA} = 4 : 3$$

$$(\overline{AB} + \overline{CA}) : \overline{AB} = (4+3) : 4$$

$$28 : \overline{AB} = 7 : 4$$

$$\overline{AB} = \frac{28 \cdot 4}{7} = 16$$

$$AC = (\overline{AB} + \overline{CA}) - \overline{AB} = 28 - 16 = 12$$

$$\overline{AB} : \overline{AC} = 3 : 4$$

$$(\overline{AB} + \overline{AC}) : \overline{AB} = (3+4) : 3$$

$$28 : \overline{AB} = 7 : 3$$

$$\overline{AB} = \frac{28 \cdot 3}{7} = 12$$

$$AC = (\overline{AB} + \overline{AC}) - \overline{AB} = 28 - 12 = 16$$

$$\begin{aligned} BC &= \sqrt{AB^2 + AC^2} = \\ &= \sqrt{16^2 + 12^2} = \\ &= \sqrt{256 + 144} = \\ &= \sqrt{400} = 20 \text{ e} \end{aligned}$$

$$\begin{aligned} Z_p &= AB + BC + CA = \\ &= 16 + 20 + 12 = \\ &= 48 \text{ e} \end{aligned}$$

$$\begin{aligned} BC &= \sqrt{AB^2 + AC^2} = \\ &= \sqrt{12^2 + 16^2} = \\ &= \sqrt{144 + 256} = \\ &= \sqrt{400} = 20 \text{ e} \end{aligned}$$

$$\begin{aligned} Z_p &= AB + BC + CA = \\ &= 12 + 20 + 16 = \\ &= 48 \text{ e} \end{aligned}$$



$$\begin{array}{l|l} \hat{A} = 90^\circ & 1 \\ \overline{AB} = \frac{5}{12} \overline{CA} & 2p \\ \overline{AB} = 50m & A \end{array}$$

$$\overline{CA} = \overline{AB} : \frac{5}{12} = 50 : \frac{5}{12} = 120 \text{ m}$$

$$A = \frac{\overline{AB} \cdot \overline{CA}}{2} = \frac{50 \cdot 120}{2} = 3000 \text{ m}^2$$

$$\begin{aligned} \overline{BC} &= \sqrt{\overline{AB}^2 + \overline{AC}^2} = \sqrt{50^2 + 120^2} = \sqrt{2500 + 14400} = \\ &= \sqrt{16900} = 130 \text{ m} \end{aligned}$$

$$\begin{aligned} Z_p &= \overline{AB} + \overline{BC} + \overline{CA} = \\ &50 + 130 + 120 = 300 \text{ m} \end{aligned}$$



$$\begin{array}{r}
 39 \cdot \\
 39 = \\
 \hline
 351 + \\
 1170 = \\
 \hline
 1521
 \end{array}$$

$$\hat{A} = 90^\circ$$

$$\begin{array}{l}
 \overline{AB} + \overline{CA} = 119 \text{ km} \\
 \overline{AB} - \overline{CA} = 41 \text{ km}
 \end{array}
 \left| \begin{array}{l} 1 \\ 2 \\ A \end{array} \right.$$

$$\overline{AB} = \frac{r+d}{2} = \frac{119+41}{2} = \frac{160}{2} = 80 \text{ km}$$

$$\overline{CA} = \frac{r-d}{2} = \frac{119-41}{2} = \frac{78}{2} = 39 \text{ km}$$

$$A = \frac{\overline{AB} \cdot \overline{CA}}{2} = \frac{80 \cdot 39}{2} = 1560 \text{ km}$$

$$\overline{BC} = \sqrt{\overline{AB}^2 + \overline{CA}^2} = \sqrt{80^2 + 39^2} = \sqrt{6400 + 1521} = \sqrt{7921} =$$

$$\sqrt{6600 + 1} = 81 = \sqrt{7921} = 89 \quad \checkmark$$

$$2p = \overline{AB} + \overline{BC} + \overline{CA} = 80 + 80 + 39 = 208_{\text{km}}$$

1:10

$$x : y = 12 : 8$$

$$x - y = 24$$

$$(x - y) : x = (12 - 8) : 12$$

$$24 : x = 4 : 12$$

$$x = \frac{24 \cdot 12}{4} = 72$$

$$y = x - (x - y) = 72 - 24 = 48$$

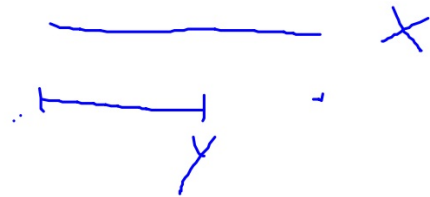
$$x : y = 7 : 4$$

$$x - y = 30$$

$$(x - y) : y = (7 - 4) : 4$$

$$30 : y = 3 : 4$$

$$y = \frac{30 \cdot 4}{3} = 40$$



$$x = y + (x - y) = 40 + 30 = 70$$

$$x:y = \frac{7}{8} : \frac{2}{5}$$

$$x-y = \frac{57}{20}$$

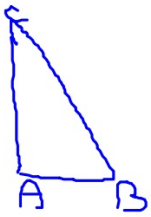
$$(x-y) : x = \left(\frac{7}{8} - \frac{2}{5}\right) : \frac{7}{8}$$

$$\frac{57}{20} : x = \left(\frac{35-16}{40}\right) : \frac{7}{8}$$

$$\frac{57}{20} : x = \frac{19}{40} : \frac{7}{8}$$

$$x = \frac{\frac{57}{20} \cdot \frac{7}{8}}{\frac{19}{40}} = \frac{\frac{57}{20} \cdot \frac{7}{8} \cdot \frac{40}{40}}{\frac{19}{40}} = \frac{21}{5}$$

$$y = x - (x-y) = \frac{21}{5} - \frac{57}{20} = \frac{105-57}{20} = \frac{48}{20} = \frac{12}{5}$$



$$\begin{aligned} \angle A &= 90^\circ \\ \overline{AB} &= \frac{12}{5} \overline{CA} \\ \overline{AB} &= \overline{CA} + 21 \end{aligned}$$

1
2P

$$\overline{AB} : \overline{CA} = 12 : 5$$

$$\overline{AB} - \overline{CA} = 21 \text{ cm}$$

$$(\overline{AB} - \overline{CA}) : \overline{AB} = (12 - 5) : 12$$

$$21 : \overline{AB} = 7 : 12$$

$$\overline{AB} = \frac{3}{21 \cdot 12} = 36$$

$$\overline{CA} = \overline{AB} - (\overline{AB} - \overline{CA}) = 30 - 21 = 15 \text{ cm}$$

$$\overline{BC} = \sqrt{\overline{AB}^2 + \overline{CA}^2} = \sqrt{36^2 + 15^2} = \sqrt{1296 + 225} =$$

$$= \sqrt{1521} = 39 \text{ cm}$$

$$\angle P = \overline{AB} + \overline{BC} + \overline{CA} = 36 + 39 + 15 = 90 \text{ L}$$

1:3