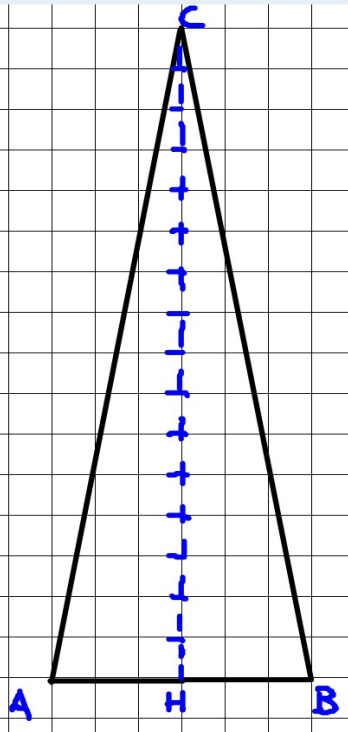
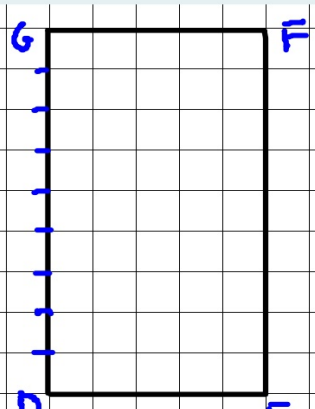
Un triangolo isoscele ha un lato obliquo lungo 41 cm e il perimetro di 100 cm. Calcola la misura della base di un rettangolo equivalente al triangolo e avente l'altezza congruente ai 9/16 dell'altezza relativa alla base del triangolo dato. **[16 cm]**





$\overline{BC} = 41\,cm$

$2P_{(ABC)} = 100\,cm$

$A_{(ABC)} = A_{(DEFG)}$

$\overline{EF} = \frac{9}{16} \cdot \overline{CH}$

$\overline{DE} = ?$

$\overline{DE}$

$A_{(DEFG)}$ — $\overline{EF}$

$A_{(ABC)}$ — $\overline{CH}$

FORMULA DI ERONE

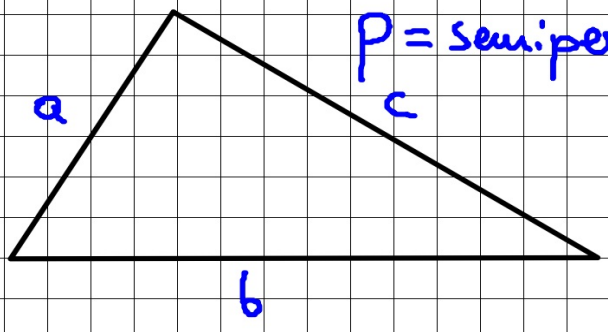
$A_{(ABC)}$

$2P_{(ABC)}$

$\overline{AB}$

$\overline{BC}$

FORMULA DI ERONE



$$A = \sqrt{p \times (p-a) \times (p-b) \times (p-c)}$$

$$\overline{AB} = cm\left(100 - 41\cdot 2\right) = cm\,18$$

$$A_{(ABC)} = \sqrt{\frac{100}{2}\cdot\left(\frac{100}{2}-41\right)\cdot\left(\frac{100}{2}-41\right)\cdot\left(\frac{100}{2}-18\right)} =$$

$$= cm^2\sqrt{50\cdot 9\cdot 9\cdot 32} = cm^2$$

$$= cm^2\sqrt{5^2\cdot 2\cdot 3^2\cdot 3^2\cdot 2^5} = cm^2\sqrt{2^6\cdot 3^4\cdot 5^2} =$$

$$= cm^2\ 2^3\cdot 3^2\cdot 5 = cm^2\ 360$$

$\overline{CH} = cm\left(\frac{360 \cdot 2}{18}\right) = cm\ 40$

$\overline{EF} = cm\left(\frac{\overset{10}{\cancel{60}}}{\underset{2}{\cancel{5}}} \cdot \frac{9}{\underset{4}{\cancel{16}}}\right) = cm\ 22{,}5$

$\overline{DE} = cm\left(\frac{360}{22{,}5}\right) = cm\ 16$