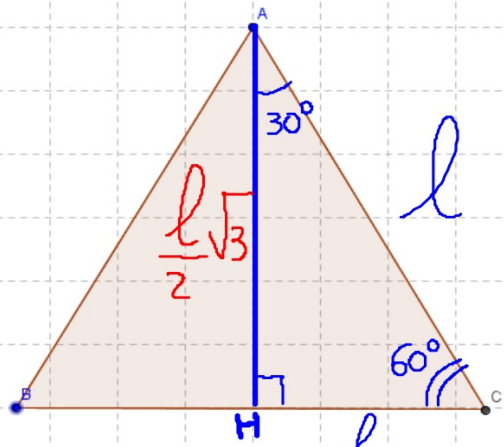


$\overline{AC} = \ell$

$\overline{HC} = \frac{\ell}{2}$

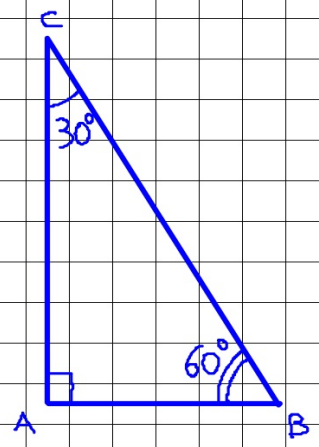
$\overline{AH} = ?$

$$\overline{AH} = \sqrt{\overline{AC}^2 - \overline{HC}^2} = \sqrt{\ell^2 - \left(\frac{\ell}{2}\right)^2} = \sqrt{\ell^2 - \frac{\ell^2}{4}} =$$

$$= \sqrt{\frac{3}{4}\ell^2} = \frac{\sqrt{3}}{\sqrt{4}} \cdot \sqrt{\ell^2} = \frac{\ell}{2} \cdot \sqrt{3}$$

$$\overline{AB} = \frac{\overline{BC}}{2}$$

$$\overline{AC} = \frac{\overline{BC}}{2} \cdot \sqrt{3}$$

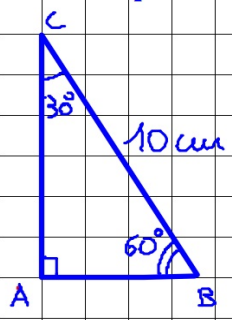


$$\overline{BC} = ?$$

$$\overline{BC} = 2\,\overline{AB}$$

$$\overline{BC} = \frac{\overline{AC} \cdot 2}{\sqrt{3}}$$

Determina perimetro e area di un triangolo rettangolo con gli angoli acuti di 30° e 60°, sapendo che l'ipotenusa misura 10 cm.



$\overline{BC} = 10\ cm$

$2p_{(\triangle ABC)} = ?$

$A_{(\triangle ABC)} = ?$

$\overline{AB} = \frac{1}{2}\overline{BC} = cm\left(10 \cdot \frac{1}{2}\right) = 5\ cm$

$\overline{AC} = \sqrt{\overline{BC}^2 - \overline{AB}^2} = cm\left(\sqrt{10^2 - 5^2}\right) = cm\ 8{,}66$

$\left(\overline{AC} = \frac{BC}{2} \cdot \sqrt{3} = cm\left(\frac{10}{2} \cdot \sqrt{3}\right) = cm\ 8{,}66\right)$

$2p_{(\triangle ABC)} = cm\left(10 + 5 + 8{,}66\right) = cm\ 23{,}66$

$A_{(\triangle ABC)} = cm^2\left(5 \cdot 8{,}66 : 2\right) = cm^2\ 21{,}65$

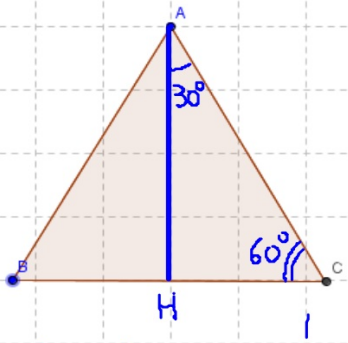
L'altezza di un triangolo equilatero misura 17,32 dm. Calcola perimetro e area del triangolo.

[60 dm; 173,2 dm²]

$\overline{AH} = 17{,}32\ dm$

$2P_{(\triangle ABC)} = ?$

$A_{(\triangle ABC)} = ?$

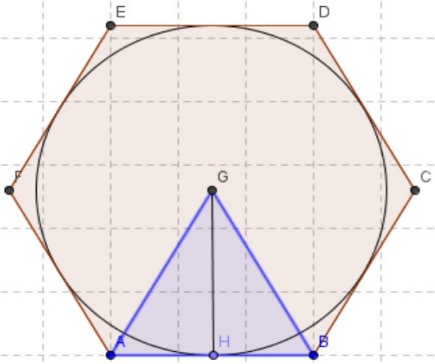


$$\overline{AC} = \frac{\overline{AH} \cdot 2}{\sqrt{3}} = dm\left(\frac{17{,}32 \cdot 2}{1{,}732}\right) = dm\,20$$

$0{,}866$

$$2P_{(\triangle ABC)} = dm(20 \cdot 3) = dm\,60$$

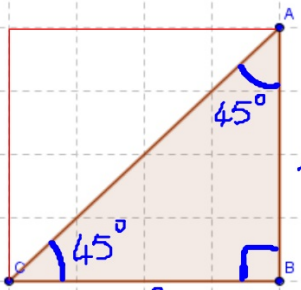
$$A_{(\triangle ABC)} = dm^2[(20 \cdot 17{,}32) : 2] = dm^2\,173{,}2$$



$\overline{AB} = \overline{AG} = \overline{GB}$

nº fisso !

$$\overline{GH} = \overline{AB} \cdot \frac{\sqrt{3}}{2} = \overline{AB} \cdot \frac{1{,}732}{2} = \overline{AB} \cdot 0{,}866$$



l

l

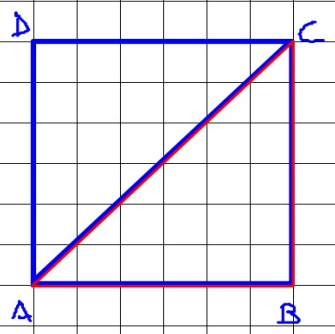
$\overline{AB} = \overline{BC} = l$

$\overline{AC} = ?$

$$\overline{AC} = \sqrt{\overline{AB}^2 + \overline{BC}^2} = \sqrt{l^2 + l^2} = \sqrt{2 \cdot l^2} = \sqrt{2} \cdot l$$

$$\overline{AC} = \overline{AB} \cdot \sqrt{2}$$

Determinare il perimetro e l'area di un quadrato che ha la diagonale di cm 141.



$\overline{AC} = 141\ cm$

$2p_{(\square ABCD)} = ?$

$A_{(\square ABCD)} = ?$

$\overline{AC} = \overline{AB} \cdot \sqrt{2}$

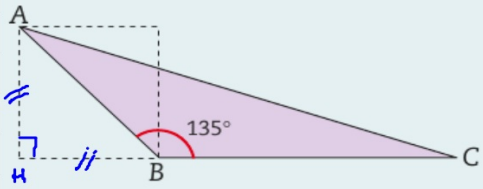
$\overline{AB} = \dfrac{\overline{AC}}{\sqrt{2}} = cm\left(\dfrac{141}{\sqrt{2}}\right) = cm\ 100$

$2p_{(\square ABCD)} = cm\ 100 \cdot 4 = cm\ 400$

$A_{(\square ABCD)} = cm^2\ 100^2 = 10\,000\ cm^2$

Nel triangolo ottusangolo *ABC* l'angolo ottuso misura 135°, il lato *AB* 4,25 cm e il lato *BC* 8 cm. Calcola l'area del triangolo.

[≅ **12,02 cm²**]



$2p_{(\triangle ABC)} = ?$

$\overline{AH} = \frac{\overline{AB}}{\sqrt{2}} = cm\left(\frac{4,25}{\sqrt{2}}\right) \simeq cm\ 3$

$A_{(\triangle ABC)} = cm^2\left(\frac{8 \cdot 3}{2}\right) \simeq cm^2\ 12$

$\overline{HC} = \overline{HB} + \overline{BC} = cm\,(3+8) = cm\ 11$

$\overline{AC} = \sqrt{\overline{HC}^2 + \overline{AH}^2} = cm\left(\sqrt{11^2+3^2}\right) = cm\ 11,4$

$2p_{(\triangle ABC)} = \overline{AB} + \overline{BC} + \overline{AC} = cm\,(4,25+8+11,4) =$

$cm\ 23,65$