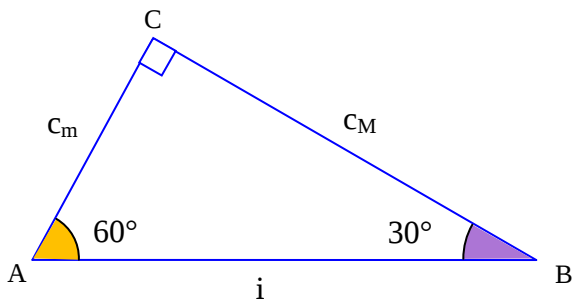


Triangoli rettangoli particolari

triangolo rettangolo con angoli di 30° e 60°



i = ipotenusa
 c_m = cateto minore
 c_M = cateto maggiore

$$c_m = \frac{1}{2}i$$

$$c_M = \frac{\sqrt{3}}{2}i$$

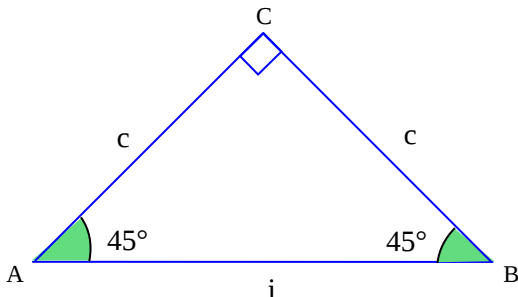
$$i = 2c_m$$

$$c_m = \frac{\sqrt{3}}{3}c_M$$

$$c_M = \sqrt{3}c_m$$

$$i = 2\frac{\sqrt{3}}{3}c_M$$

triangolo rettangolo con angoli di 45° (isoscele)

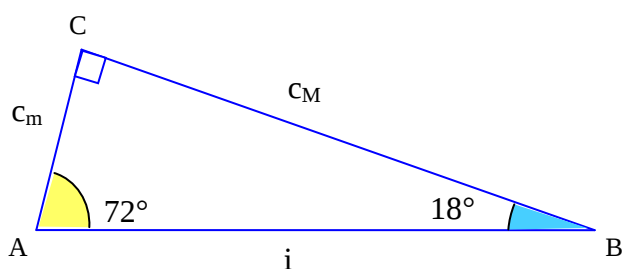


i = ipotenusa
 c = cateto

$$c = \frac{\sqrt{2}}{2}i$$

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

triangolo rettangolo con angoli di 18° e 72°



i = ipotenusa
 c_m = cateto minore
 c_M = cateto maggiore

$$c_m = \frac{\sqrt{5}-1}{4}i$$

$$c_M = \frac{\sqrt{10+2\sqrt{5}}}{4}i$$

$$i = (\sqrt{5}+1)c_m$$

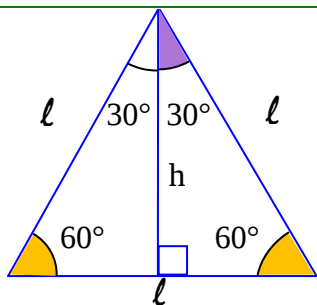
$$c_m = \frac{\sqrt{5}-1}{\sqrt{10+2\sqrt{5}}}c_M$$

$$c_M = \frac{\sqrt{10+2\sqrt{5}}}{\sqrt{5}-1}c_m$$

$$i = \frac{4}{\sqrt{10+2\sqrt{5}}}c_M$$

applicazioni

TRIANGOLO EQUILATERO:
 applicazione del triangolo rettangolo con angoli di 30° e 60°

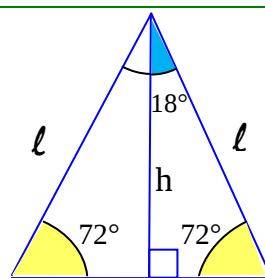


l = lato
 h = altezza

$$l = \frac{2\sqrt{3}}{3}h$$

$$h = \frac{\sqrt{3}}{2}l$$

TRIANGOLO ISOSCELE:
 applicazione del triangolo rettangolo con angoli di 18° e 72°

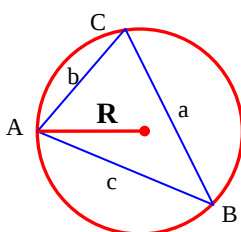
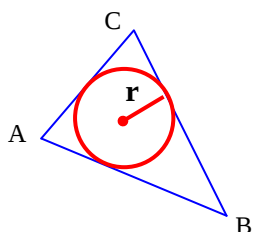


l = lato
 h = altezza

$$l = \frac{4}{\sqrt{10+2\sqrt{5}}}h$$

$$h = \frac{\sqrt{10+2\sqrt{5}}}{4}l$$

raggio della circonferenza inscritta e circoscritta ad un triangolo qualsiasi



r = raggio circonferenza inscritta
 R = raggio circonferenza circoscritta
 $\mathcal{A}$ = area del cerchio
 p = semiperimetro del triangolo

$$r = \frac{\mathcal{A}}{p}$$

$$R = \frac{abc}{4\mathcal{A}}$$