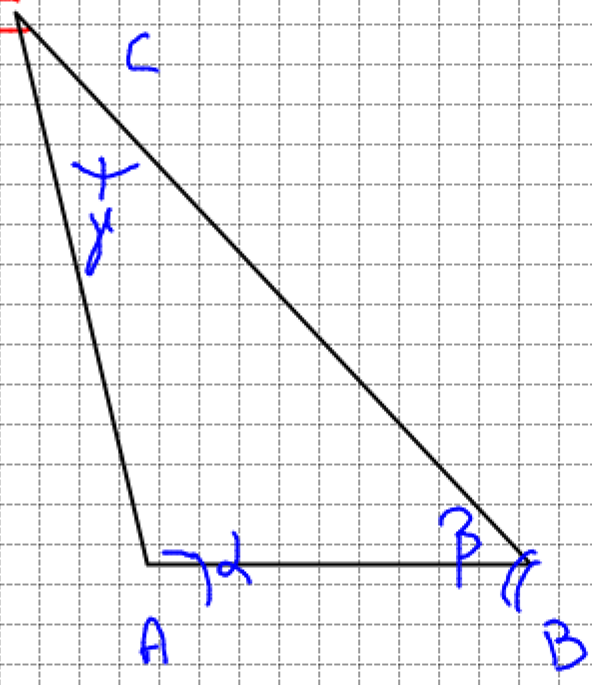
N 82



$\beta = \frac{\pi}{4}$

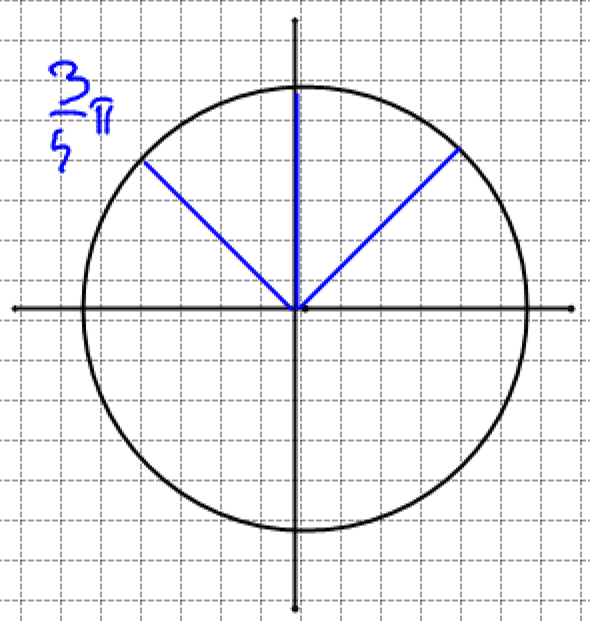
$\cos\alpha = -\frac{1}{5} \quad \frac{\pi}{2} < \alpha < \pi$

$\alpha + \beta + \gamma = \pi \qquad \beta = \frac{\pi}{4} \qquad \alpha + \gamma = \pi - \frac{\pi}{4} \qquad \alpha + \gamma = \frac{3}{4}\pi$

$\alpha = \frac{3}{4}\pi - \gamma \qquad \cos\alpha = \cos\left(\frac{3}{4}\pi - \gamma\right)$

$-\frac{1}{5} = \cos\left(\frac{3}{4}\pi - \gamma\right)$

$-\frac{1}{5} = \cos\frac{3}{4}\pi \cos\gamma + \operatorname{sen}\frac{3}{4}\pi \operatorname{sen}\gamma$



$$\begin{cases} -\frac{1}{5} = -\frac{\sqrt{2}}{2}\cos\gamma + \frac{\sqrt{2}}{2}\operatorname{sen}\gamma \\ \operatorname{sen}^2\gamma + \cos^2\gamma = 1 \end{cases}$$

$$\begin{cases} -\frac{\sqrt{2}}{2}\cos\gamma + \frac{\sqrt{2}}{2}\sqrt{1-\cos^2\gamma} = -\frac{1}{5} \\ \operatorname{sen}\gamma = +\sqrt{1-\cos^2\gamma} \end{cases}$$

\+ perché γ è angolo di un triangolo che ha un angolo $> \frac{\pi}{2}$ quindi $\gamma < \frac{\pi}{2}$

$\frac{1}{2}(1-\cos^2\gamma) = \frac{1}{25} + \frac{1}{2}\cos^2\gamma - \frac{\sqrt{2}}{5}\cos\gamma$

$\frac{1}{2} - \frac{1}{2}\cos^2\gamma - \frac{1}{2}\cos^2\gamma + \frac{\sqrt{2}}{5}\cos\gamma - \frac{1}{25} = 0$

$-\cos^2\gamma + \frac{\sqrt{2}}{5}\cos\gamma + \frac{23}{50} = 0$

$-\cos^2\gamma + \frac{\sqrt{2}}{5}\cos\gamma + \frac{23}{50} = 0$

$$\cos\gamma = \frac{-\frac{\sqrt{2}}{5} \pm \sqrt{\frac{2}{25} + \frac{46}{25}}}{-2} = \begin{cases} \dfrac{-\frac{\sqrt{2}}{5} - \frac{4\sqrt{3}}{5}}{-2} \\[2ex] \dfrac{-\frac{\sqrt{2}}{5} + \frac{4\sqrt{3}}{5}}{-2} \end{cases}$$

48	2
24	2
12	2
6	2
3	3
1	

$\cos\gamma_1 = \frac{\sqrt{2}+4\sqrt{3}}{10}$ SI

$\cos\gamma_2 = \frac{\sqrt{2}-4\sqrt{3}}{10}$ NO $\qquad \operatorname{sen}\gamma_2 = +\sqrt{1-\cos^2\gamma_2}$