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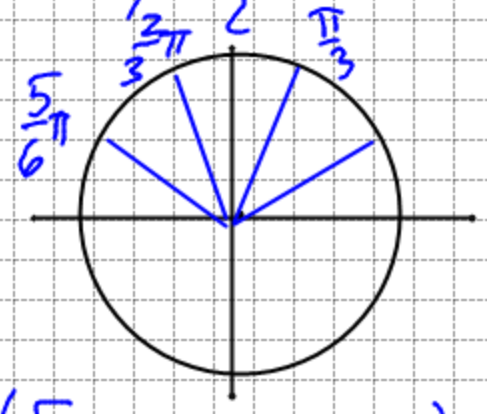
Risolvere la seguente identità

$$\cos\left(\frac{\pi}{3}-\alpha\right)-\operatorname{sen}\left(\frac{2}{3}\pi+\alpha\right)+2\cos\left(\alpha+\frac{\pi}{3}\right)-\cos\left(\frac{5}{6}\pi+\alpha\right)=\frac{3\cos\alpha-\left(\sqrt{3}-2\right)\operatorname{sen}\alpha}{2}$$

$$\cos\frac{\pi}{3}\cos\alpha+\operatorname{sen}\frac{\pi}{3}\operatorname{sen}\alpha-\left(\operatorname{sen}\frac{2}{3}\pi\cos\alpha+\cos\frac{2}{3}\pi\operatorname{sen}\alpha\right)+2\left(\cos\alpha\cos\frac{\pi}{3}-\operatorname{sen}\alpha\operatorname{sen}\frac{\pi}{3}\right)-$$

$$-\left(\cos\frac{5}{6}\pi\cos\alpha-\operatorname{sen}\frac{5}{6}\pi\operatorname{sen}\alpha\right)=\frac{3}{2}\cos\alpha-\frac{\sqrt{3}-2}{2}\operatorname{sen}\alpha$$



$$\frac{1}{2}\cos\alpha+\frac{\sqrt{3}}{2}\operatorname{sen}\alpha-\left(\frac{\sqrt{3}}{2}\cos\alpha-\frac{1}{2}\operatorname{sen}\alpha\right)+2\left(\frac{1}{2}\cos\alpha-\frac{\sqrt{3}}{2}\operatorname{sen}\alpha\right)-$$

$$-\left(-\frac{\sqrt{3}}{2}\cos\alpha-\frac{1}{2}\operatorname{sen}\alpha\right)=\frac{3}{2}\cos\alpha-\frac{\sqrt{3}-2}{2}\operatorname{sen}\alpha$$

$$\frac{1}{2}\cos\alpha+\frac{\sqrt{3}}{2}\operatorname{sen}\alpha-\frac{\sqrt{3}}{2}\cos\alpha+\frac{1}{2}\operatorname{sen}\alpha+\cos\alpha-\sqrt{3}\operatorname{sen}\alpha+\frac{\sqrt{3}}{2}\cos\alpha+\frac{1}{2}\operatorname{sen}\alpha=$$

$$=\frac{3}{2}\cos\alpha-\frac{\sqrt{3}-2}{2}\operatorname{sen}\alpha$$

$$\frac{3}{2}\cos\alpha+\operatorname{sen}\alpha-\frac{\sqrt{3}}{2}\operatorname{sen}\alpha=\frac{3}{2}\cos\alpha-\frac{\sqrt{3}}{2}\operatorname{sen}\alpha+\operatorname{sen}\alpha$$