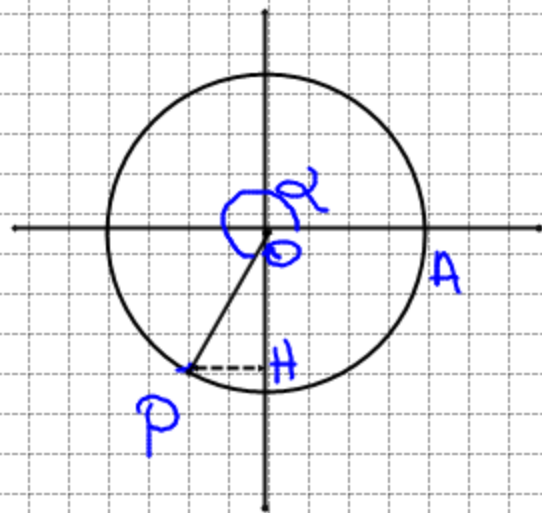


CODICE RCS EDUCATION

14 111 71 192

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$$H(0, -\frac{2}{3})$$

$$A(1, 0)$$

caleda

$$\frac{2\cos\alpha + \sin\alpha}{\operatorname{tg}\alpha}$$

$$\operatorname{tg}\alpha = \frac{\sin\alpha}{\cos\alpha} =$$

$$OH = \sin\alpha = -\frac{2}{3}$$

$$= -\frac{2}{3} \cdot \left(-\frac{2}{3}\right)$$

$$\cos\alpha = -\sqrt{1 - \sin^2\alpha} = -\sqrt{1 - \frac{4}{9}} = -\sqrt{\frac{5}{9}}$$

$$\operatorname{tg}\alpha = \frac{2}{3}$$

$$\frac{2\cos\alpha + \sin\alpha}{\operatorname{tg}\alpha} =$$

$$\frac{2\left(-\frac{\sqrt{5}}{3}\right) + \left(-\frac{2}{3}\right)}{\frac{2}{3}} = \frac{-\frac{2\sqrt{5}}{3} - \frac{2}{3}}{\frac{2}{3}} =$$

$$= -\frac{2\sqrt{5} - 2}{2} = -\frac{2\sqrt{5} + 2}{2} = -\frac{2\sqrt{5} + 2}{2}$$

$$(\sqrt{3}+1) \left[\sin\left(\frac{2}{3}\pi - \alpha\right) - \sin\left(\frac{\pi}{6} + \alpha\right) \right] + \sqrt{2} \cos\left(\alpha - \frac{\pi}{4}\right) - \cos^2\left(\frac{\pi}{6} - \alpha\right) + \sin^2 \alpha + \sqrt{3} \cos \alpha \cos\left(\alpha - \frac{\pi}{6}\right) =$$

$$(\sqrt{3}+1) \left[\sin \frac{2}{3}\pi \cos \alpha - \sin \alpha \cos \frac{2}{3}\pi - \left(\sin \frac{\pi}{6} \cos \alpha + \sin \alpha \cos \frac{\pi}{6} \right) \right] + \sqrt{2} \left(\cos \alpha \cos \frac{\pi}{4} + \sin \alpha \sin \frac{\pi}{4} \right) - \left(\cos \frac{\pi}{6} \cos \alpha + \sin \frac{\pi}{6} \sin \alpha \right)^2 + \sin^2 \alpha + \sqrt{3} \cos \alpha \left(\cos \alpha \cos \frac{\pi}{6} + \sin \alpha \sin \frac{\pi}{6} \right) =$$

$$(\sqrt{3}+1) \left[\frac{\sqrt{3}}{2} \cos \alpha + \frac{1}{2} \sin \alpha - \frac{1}{2} \cos \alpha - \frac{\sqrt{3}}{2} \sin \alpha \right] + \sqrt{2} \left(\frac{\sqrt{2}}{2} \cos \alpha + \frac{\sqrt{2}}{2} \sin \alpha \right) - \left(\frac{\sqrt{3}}{2} \cos \alpha + \frac{1}{2} \sin \alpha \right)^2 + \sin^2 \alpha + \sqrt{3} \cos \alpha \left(\frac{\sqrt{3}}{2} \cos \alpha + \frac{1}{2} \sin \alpha \right) =$$

$$= \frac{3}{2} \cos \alpha + \frac{\sqrt{3}}{2} \sin \alpha - \frac{\sqrt{3}}{2} \cos \alpha + \frac{3}{2} \sin \alpha - \frac{\sqrt{3}}{2} \cos \alpha + \frac{1}{2} \sin \alpha - \frac{1}{2} \cos \alpha + \frac{\sqrt{3}}{2} \sin \alpha + \cos \alpha + \sin \alpha - \left(\frac{3}{4} \cos^2 \alpha + \frac{1}{4} \sin^2 \alpha + \frac{\sqrt{3}}{2} \cos \alpha \sin \alpha \right) +$$

$$+ \sin^2 \alpha + \frac{3}{2} \cos^2 \alpha + \frac{\sqrt{3}}{2} \sin \alpha \cos \alpha =$$

$$= (2-\sqrt{3}) \cos \alpha + (\sqrt{3}+3) \sin \alpha - \frac{3}{4} \cos^2 \alpha - \frac{1}{4} \sin^2 \alpha - \frac{\sqrt{3}}{2} \cos \alpha \sin \alpha + \sin^2 \alpha + \frac{3}{2} \cos^2 \alpha + \frac{\sqrt{3}}{2} \sin \alpha \cos \alpha =$$

$$= (2-\sqrt{3}) \cos \alpha + (\sqrt{3}+3) \sin \alpha + \frac{3}{4} \cos^2 \alpha + \frac{3}{4} \sin^2 \alpha =$$

$$= (2-\sqrt{3}) \cos \alpha + (\sqrt{3}+3) \sin \alpha + \frac{3}{4}$$