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$5x^2+y^2=5$ — (1)

$x^2+y^2=4$ — (2)

Solve it simultaneously

$1 \times 5x^2+y^2=5$

$1 \times x^2+y^2=4$

$5x^2+y^2=5$

$-x^2+y^2=4$

$4x^2=1$

$\frac{4x^2}{4}=\frac{1}{4}$

$x^2=\frac{1}{4}$

$x=\sqrt{1/4}=1/2$

Substitute $x=1/2$ in eqn (2)

$(\frac{1}{2})^2+y^2=4$

$\frac{1}{4}+y^2=4$

$y^2=4-\frac{1}{4}$

$y^2=3^{3/4}$

$y=\sqrt{3^{3/4}}$

$=\sqrt{15/2}$

$\tan\theta=\frac{dy}{dx}$

Differentiate eqn (1)

$5x^2+y^2=5$

$10x+2y\,dy/dx=0$

$\frac{2y\,dy/dx}{2y}=\frac{-10x}{2y}$

$=\frac{-5x}{y}$

Substitute $x=1/2$ and $y=\sqrt{15}/2$

$dy/dx=\frac{-5(1/2)}{\sqrt{15}/2}$

$=-1.271$

$\tan\theta_1=dy/dx$

$\theta_1=\tan^{-1}\frac{dy}{dx}$

$\theta_1=\tan^{-1}(-1.271)$

$=-52.239$

Differentiate eqn (2)

$x^2+y^2=4$

$2x+2y\,dy/dx=0$

$\frac{2y\,dy/dx}{2y}=\frac{-2x}{2y}$

$\frac{dy}{dx}=-\frac{x}{y}$

$=\frac{-1/2}{\sqrt{15}/2}=-0.258$

$\frac{dy}{dx}\tan\theta_2=dy/dx$

$\theta_2=\tan^{-1}\frac{dy}{dx}=-14.4775$

$\theta_2-\theta_1=-52.239(-)-14775$

$=-52.239+14.4775$

$=-37.7615$

$|\theta_2-\theta_1|=37.7615^\circ$

$\simeq 37.76^\circ$