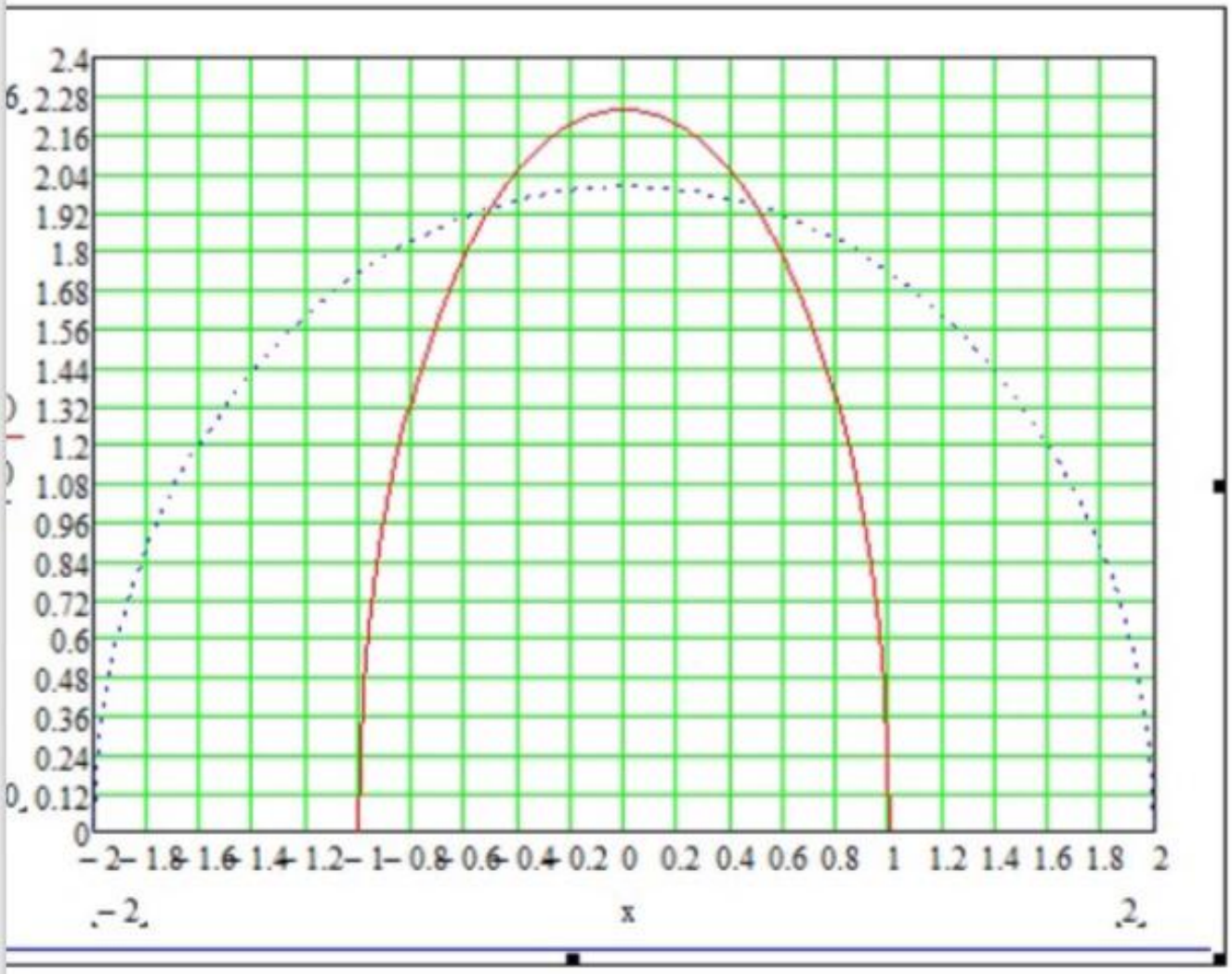
$f(x) := \sqrt{5 - 5x^2}$ $g(x) := \sqrt{4 - x^2}$



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$5x^2 + y^2 = 5$ ——— (i)

$x^2 + y^2 = 4$ ——— (ii)

$y^2 = 4 - x^2$ ——— (iii)

putting y^2 into eqn (iii)

$5x^2 + 4 - x^2 = 5$

$4x^2 + 4 - 5 = 0$

$4x^2 - 1 = 0$

$4x^2 = 1$

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

$x = \sqrt{1/4}$

$x = 1/2$

Using $x = 1/2$

$(1/2)^2 + y^2 = 4$

$1/4 + y^2 = 4$

$y^2 = 4 - 1/4$

$y^2 = 3.75$

$y = \sqrt{3.75}$ $\therefore y = 1.936$

$\frac{dy}{dx} = 5x^2 + y^2 = 5$

$10x + 2y\frac{dy}{dx} = 0$

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

putting $x = 0.5$ $y = 1.936$

$\frac{dy}{dx} = \frac{-10x}{2y} = \frac{-5x}{y} = \frac{-5(0.5)}{1.936} = -1.2913$

$\tan^{-1} -1.2913 = -52.25°$

$\frac{dy}{dx} = x^2 + y^2 = 4$

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

$2y\,dy = -2x$

$\frac{dy}{dx} = \frac{-x}{y} = \frac{-0.5}{1.936}$

$= -0.283$

$\tan^{-1}(-0.2583)$

$= -14.48$

$\therefore$ The total angle

$\theta_2 - \theta_1 = -14.48 - -52.5$

$= -14.48 + 52.5$

$= 38.02°$