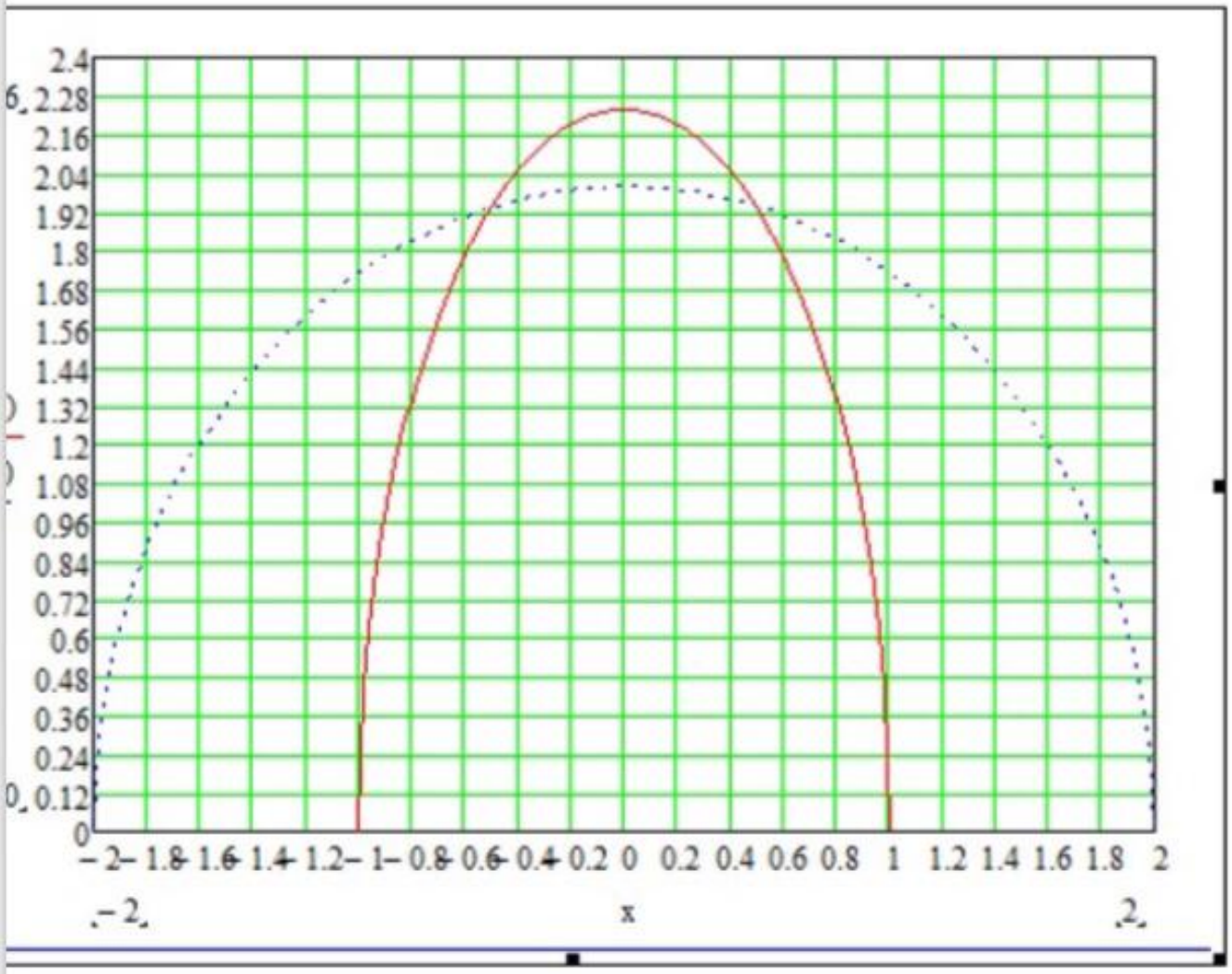
$f(x) := \sqrt{5 - 5x^2}$ $g(x) := \sqrt{4 - x^2}$



Assignment

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$5x^2 + y^2 = 5$ --- (i)
$x^2 + y^2 = 4$ --- (ii)
$y^2 = 4 - x^2$
Pa sub y^2 into equ (i)
$5x^2 + 4 - x^2 = 5$
$4x^2 + 4 - 5 = 0$
$4x^2 - 1 = 0$
$4x^2 = 1$
$x^2 = 1/4$
$x = \pm 1/2$

Using $x = 1/2$ because we use the positive

$(1/2)^2 + y^2 = 4$
$y^2 = 4 - 1/4$
$y^2 = \frac{15}{4}$
$y = \sqrt{15/4}$
$y = 1.936$

Differentiating equ (i)
$10x + 2y\frac{dy}{dx} = 0$
$\frac{dy}{dx} = \frac{-10x}{2y}$
$\frac{dy}{dx} = \frac{-5x}{y}$
$\frac{dy}{dx} = \frac{-5(1/2)}{1.936}$
$\frac{dy}{dx} = -1.2913$

$\tan\theta_1 = \frac{dy}{dx}$
$\theta_1 = \tan^{-1} -1.2913$
$\theta_1 = -52.25^0$

Differentiating equ (ii)
$2x + 2y\frac{dy}{dx} = 0$
$\frac{dy}{dx} = -x/y$
$\frac{dy}{dx} = \frac{-0.5}{1.936}$
$\frac{dy}{dx} = -0.2583$
$\theta_2 = \tan^{-1}\frac{dy}{dx}$
$\theta_2 = -14.48^0$

∴ the total angle
$= \theta_2 - \theta_1$
$= -14.48^0 - (52.25^0)$
$= 38.02^0$