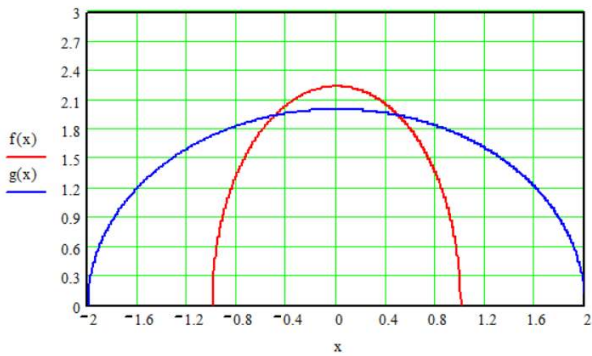


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MATRIC NUMBER: 18/ENG02/080

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

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



$$x := 0.4954$$

$$y := 1.9435$$

$$x := 0.4954$$

$$y := 1.9435$$

$$\left(\frac{d}{dx}f(x)\right) = -1.275$$

$$\frac{d}{dx}g(x) = -0.256$$

$$\theta_a := \operatorname{atan}\left(\frac{d}{dx}f(x)\right)$$

$$\theta_a = -51.897 \text{ deg}$$

$$\theta_b := \operatorname{atan}\left(\frac{d}{dx}g(x)\right)$$

$$\theta_b = -14.341 \text{ deg}$$

$$\text{magnitude} := \theta_b - \theta_a$$

$$\text{magnitude} = 37.556 \text{ deg}$$