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Opgave 368



Find skæringspunkter med x-aksen

$$f(x) = \cos x$$

$$f(x) = 0$$

$$\cos x = 0$$

$$x = \cos^{-1} 0$$

$$x_1 = 1,570796$$

$$x_2 = x_1 + \pi$$

$$x_2 = 1.5707 + \pi$$

$$x_2 = 4,712293$$

$$F(x) = \int \cos x \, dx$$

$$\text{Define: } F(x) = \sin x$$

$$A_1 = F(x_1) - F(0)$$

$$A_1 = F(1.5707) - F(0) = 1$$

$$A_2 = F(x_2) - F(x_1)$$

$$A_2 = F(4.712) - F(1.5707) = -2$$

$$A_3 = F(2\pi) - F(x_2)$$

$$A_3 = F(2\pi) - F(4.712) = 1$$

$$A = A_1 + |A_2| + A_3$$

$$A = 1 + |-2| + 1$$

$$A = 4$$