13.04

onsdag 21 december 2022 19:34

$$\int_0^{1/2} (\arcsin x)^2 \, dx$$

$$(\arcsin 1/2)^2 = \left(\frac{\pi}{6}\right)^2 = \frac{\pi^2}{36} > 0$$

$$1 - \left(\frac{\pi}{3}\right)^2 = 1 - \frac{\pi^2}{9} < 0 \quad , \quad \frac{\pi^2}{9} > 1$$

$$1 - \left(\frac{\pi}{3}\right)^2 < 0 < \int_0^{1/2} (\arcsin x)^2 \, dx$$