14.10

torsdag 22 december 2022 20:30

$$y = e^{-x^2}$$

$$V = \int_0^\infty 2\pi x \cdot e^{-x^2}\,dx = 2\pi \int_0^\infty x \cdot e^{-x^2}\,dx = \lim_{A\to\infty} 2\pi \left[-\frac{e^{-x^2}}{2} \right]_0^A = 2\pi \left(-\frac{e^{-A^2}}{2} + \frac{e^0}{2} \right) = \pi$$

$e^{-\infty} \to 0$