

1. Let $f(x) = \frac{1}{\sqrt{2\pi}}e^{-\frac{x^2}{2}}$. Use Desmos to plot $y = f(x)$ on the interval $[-4, 4]$

2. Use WolframAlpha to approximate the following integrals

$$(a) \int_{-1}^1 \frac{1}{\sqrt{2\pi}}e^{-\frac{x^2}{2}} dx \quad (b) \int_{-2}^2 \frac{1}{\sqrt{2\pi}}e^{-\frac{x^2}{2}} dx \quad (c) \int_{-3}^3 \frac{1}{\sqrt{2\pi}}e^{-\frac{x^2}{2}} dx$$

If you need a refresher on the syntax:

trapezoidal sum of $(1/\text{sqrt}(2 \text{ pi})) e^{-(x^2/2)}$ from $x=-1$ to $x=1$ with 100 subdivisions