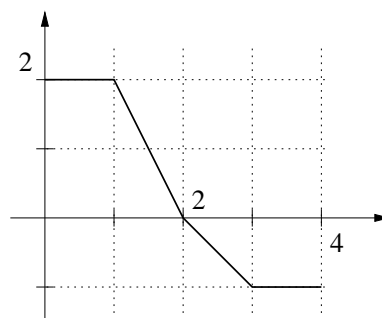


1. The following two statements are false. Explain, without any calculation, why they are false. (4 points)

a. $\int_{-1}^0 e^{-x^2} dx = -0.746824$

b. $\int_{-1}^1 x e^{-x^2} dx = 0.632121$

2. Suppose that the function f is shown in the figure to the right. If $F' = f$ and $F(0) = -1$, carefully sketch a graph of $F(x)$ for $0 \leq x \leq 4$. (3 points)



3. If the average value of $f(x) = 9x^2$ on the interval $0 \leq x \leq b$ is 48, what is b ? (3 points)