

3.69  
7  
y = e^{-x^2/2} / (2x+5)

I 2x+5 ≠ 0 → x ≠ -2.5

ii lim\_{x → -2.5^+} e^{-3/8} / +0 = ∞      lim\_{x → -2.5^-} e^{-3/8} / -0 = -∞ → x = -2.5

m = lim\_{x → ∞} e^{-x^2/2} / (2x+5) = lim\_{x → ∞} 1 / (e^{x^2/2} (2x+5)) = 1/∞ = 0

n = lim\_{x → ∞} e^{-x^2/2} / (2x+5) = lim\_{x → ∞} 1 / (e^{x^2/2} (2x+5)) = 1/∞ = 0

m = lim\_{x → -∞} e^{-x^2/2} / (2x+5) = lim\_{x → -∞} 1 / (e^{x^2/2} (2x+5)) = 1/∞ = 0

n = lim\_{x → -∞} 1 / (e^{x^2/2} (2x+5)) = 0

iii-iv y' = -x e^{-x^2/2} (2x+5) - 2 e^{-x^2/2} = -e^{-x^2/2} (2x^2 + 5x + 2) = 0

x = -2, -1/2

$\begin{array}{c} \rightarrow | \rightarrow \\ \hline -2.5 \quad -2 \quad -1/2 \end{array}$

$-2 < x < -1/2$  : 014  
 $-2.5 < x < -2, x > -1/2$  : 041  
 $x < -2.5$

max(-1/2, 1/e^2), min(-2, e^{-2})



