

4. (7 pts) $\int \left[\frac{1 - e^{-7x}}{7x + e^{-7x}} - x \right] dx =$

A. $\frac{-7}{(7x + e^{-7x})^2} + C$

B. $\frac{-1}{7(7x + e^{-7x})^2} - \frac{x^2}{2} + C$

C. $7 \ln|7x + e^{-7x}| - \frac{x^2}{2} + C$

D. $\frac{1}{7} \ln|7x + e^{-7x}| - \frac{x^2}{2} + C$

5. (9 pts) $\frac{d^2}{dx^2} \int_{\pi}^{2x} (e^{-t} - \cos 2t + 1) dt =$

A. $-2e^{-2x} - 4 \sin 4x$

B. $-4e^{-2x} - 8 \sin 4x$

C. $2e^{-2x} + 2 \cos 4x + 2$

D. $-4e^{-2t} - 8 \sin 4t$