AP Test Question
2007
Part B - No Calculator Allowed

4) A particle moves along the x - axis with position at time t given by $x(t) = e^{-t} \sin t$ for $0 \le t \le 2\pi$.

a) Find the time t at which the particle is farthest to the left. Justify your answer.

b) Find the value of the constant A for which $x(t)$ satisfies the equation $Ax''(t) + x'(t) + x(t) = 0$ for $0 \le t \le 2\pi$.