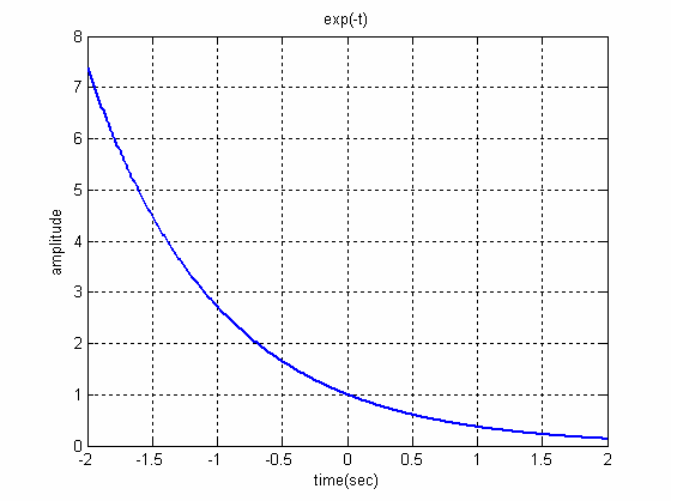
Find the even and odd parts of e^{-t}

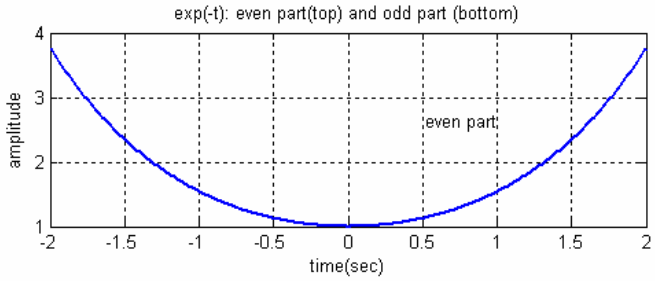
$$g(t) = g_e(t) + g_o(t)$$

$$g_e(t) = \frac{g(t) + g(-t)}{2}$$

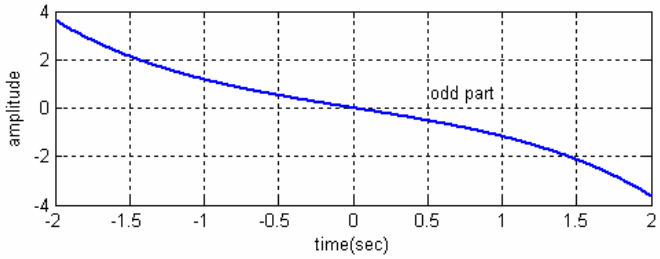
$$g_o(t) = \frac{g(t) - g(-t)}{2}$$



Even part: $\frac{e^{-t} + e^{t}}{2}$



Odd part: $\frac{e^{-t} - e^{t}}{2}$



Note: even part + odd part =

$$\frac{e^{-t} + e^{t}}{2} + \frac{e^{-t} - e^{t}}{2} = e^{-t}$$