1. There are two terms to describe the decay rate of a substance ($t_{1/2}$ half life, $\lambda$ decay constant). The following equation $A(t)$ describes how much of a substance is left after a time $t$ with an initial amount of $A_o$. Notice how both $t_{1/2}$ and $\lambda$ are used. Find $t_{1/2}$ in terms of $\lambda$.

$$A(t) = A_o 2^{-t/t_{1/2}} = A_o e^{-t\lambda}$$