



① $t+1 \leq 0 \Rightarrow t \leq -1 : y(t) = 0$

② $t-2 \leq 0 \Rightarrow t \leq 2 :$

$$y(t) = \int_0^{t+1} 2 \cdot 3e^{-\lambda/2} d\lambda = -12e^{-\lambda/2} \Big|_0^{t+1}$$

$$= 12 \left[1 - e^{-\frac{t+1}{2}} \right]$$

③ $t \geq 2 : y(t) = \int_{t-2}^{t+1} 2 \cdot 3e^{-\lambda/2} d\lambda = 12 \left[e^{-\frac{t-2}{2}} - e^{-\frac{t+1}{2}} \right]$