1. (5pts) The switch in the circuit has been open for a long time before closed at $t = 0$. Find $v(t)$ for $t \geq 0$. 

Circuit Diagram: 

- Voltage source: 12V
- Resistors: 2Ω, 4Ω, 12Ω
- Capacitor: 0.5F
- Switch: Open at $t = 0$
2. (5pts). Find $v(t)$ for $t > 0$. (You may use superposition to find $v(\infty)$).
3. (5pts) The switch has been open for a long time before it is closed at $t = 0$. Find $i(t)$ and $i_x(t)$ for $t \geq 0$. 

![Circuit Diagram]

$42V$ $i$ $i_x$

$4\Omega$ $4\Omega$ $2H$

$6\Omega$ $12\Omega$

$t = 0$
4. (5pts) The switch has been closed for a long time before it is open at \( t = 0 \). Find \( v(t) \) and \( v_R(t) \) for \( t > 0 \).
5. (5pts) The switch has been closed for a long time before open at \( t = 0 \). Find \( v(t) \) for \( t > 0 \).