$$\frac{d^2\varphi}{dx^2} = -\frac{\rho}{\varepsilon_r}$$

$$\varphi'(0) + \varphi(0) = 5 \Leftrightarrow \varphi'(0) = 5 - \varphi(0)$$

$$\varphi(3) = 2 \quad , \quad \rho = 1$$

$$\frac{d^2\varphi}{dx^2} = -\frac{\rho}{\varepsilon_r} \quad / \cdot v(x)$$

$$\varphi'' v = -\frac{v}{\varepsilon_r} \quad / \int$$

$$\int_0^3 \varphi'' v \, dx = \int_0^3 -\frac{v}{\varepsilon_r} \, dx$$

$$\left[\varphi' v\right]_0^3 - \int_0^3 \varphi' v' \, dx = \int_0^3 -\frac{v}{\varepsilon_r} \, dx$$

$$\varphi'(3) v(3) - \varphi'(0) v(0) - \int_0^3 \varphi' v' \, dx = \int_0^3 -\frac{v}{\varepsilon_r} \, dx$$

$$-\varphi'(0) v(0) - \int_0^3 \varphi' v' \, dx = -\int_0^3 \frac{v}{\varepsilon_r} \, dx$$

$$-5 v(0) + \varphi(0) v(0) - \int_0^3 \varphi' v' \, dx = -\int_0^3 \frac{v}{\varepsilon_r} \, dx$$

$$\varphi(0) v(0) - \int_0^3 \varphi' v' \, dx = 5 v(0) - \int_0^3 \frac{v}{\varepsilon_r} \, dx$$

$$B(\varphi, v) = L(v)$$

$$\varphi(3) = 2 \quad , \quad \varphi = w + \tilde{\varphi} \quad , \quad \tilde{\varphi} = 2e_n$$

$$B(\tilde{\varphi} + w, v) = L(v)$$

$$B(w, v) = L(v) - B(\tilde{\varphi}, v)$$

$$B(w, v) = L(v) - 2B(e_n, v)$$