

1. initialization  
 $\phi^{(0)}(x) \equiv 0, k_{eff}^{(0)} = 1, n = 1$
2. fission source update  
 $s^{(n-1)}(x) = \frac{1}{k_{eff}^{(n-1)}} \nu \Sigma_f(x) \phi^{(n-1)}(x)$
3. solve  
 $-\frac{d}{dx}(D(x) \frac{d}{dx} \phi^{(n)}(x)) + \Sigma_r(x) \phi^{(n)}(x) = s^{(n-1)}(x)$
4. critical eigenvalue update  
 $k_{eff}^{(n)} = \int_{\Omega} \nu \Sigma_f(x) \phi^{(n)}(x) dx$
5. IF  $\left| \frac{k_{eff}^{(n)} - k_{eff}^{(n-1)}}{k_{eff}^{(n)}} \right| > \text{tol}$   
 THEN  
 $n = n + 1$ , continue to 2,  
 ELSE END