

Some corrections

Page 3 :

The formula in part (a) should read

$$\begin{aligned} K_N(x) &= \frac{1}{N+1} \frac{1 - \cos(N+1)x}{1 - \cos x} \\ &= \frac{1}{N+1} \left(\frac{\sin \frac{N+1}{2} x}{\sin \frac{x}{2}} \right)^2, \end{aligned}$$

(Not $\frac{1}{2(N+1)} \left(\frac{\sin \frac{N+1}{2} x}{\sin \frac{x}{2}} \right)^2$ as written).