

$$f(x) = \begin{cases} 2x & (0 \leq x \leq \frac{1}{3}) \\ \frac{3-(2-3x)^2}{3} & (\frac{1}{3} \leq x \leq \frac{2}{3}) \\ 1 & (\frac{2}{3} \leq x \leq 1) \end{cases} \quad (1)$$

$$f(x) = \operatorname{sgn}(x)(1 - e^{|x|}) \quad (2)$$