

اثبات: $\sigma'(x) = \sigma(x)[1 - \sigma(x)]$

$$\sigma(x) = \frac{1}{1 + e^{-x}}$$

$$\sigma'(x) = \frac{e^{-x}}{(1 + e^{-x})^2}$$

$$\sigma'(x) = \frac{1}{1 + e^{-x}} \times \frac{e^{-x}}{1 + e^{-x}}$$

$$\sigma'(x) = \sigma(x)[1 - \sigma(x)]$$