



$$\left(\frac{\partial i}{\partial score_1} = \dots \right)$$

$$\left(\frac{\partial f}{\partial score_2} = \dots \right)$$

$$\frac{\partial o}{\partial score_3} = \frac{\partial \text{sigm}(score_3)}{\partial score_3} = \text{sigm}(score_3) (1 - \text{sigm}(score_3))$$

$$\frac{\partial g}{\partial score_4} = \frac{\partial \tanh(score_4)}{\partial score_4} = 1 - (\tanh(score_4))^2$$