$$L(\theta) = -\log p(y|\theta) = \frac{(\widehat{y}_1(\theta_1) - y_1)^2}{2\sigma^2} + \dots + \frac{d\pi}{dL} = \frac{d\pi}{d\pi} \frac{d\pi}{dL}$$

$$a_1 = \frac{(\widehat{y}_1(\theta_1) - y_1)^2}{2\sigma^2}$$

$$\frac{d\pi}{da_1} = \frac{d\pi}{dL} \frac{dL}{da_1} = \frac{d\pi}{dL}$$

$$a_1 = \frac{\partial \pi}{\partial x_1} \frac{dx}{\partial x_2} = \frac{\partial \pi}{\partial x_2} \frac{dx}{\partial x_3} = \frac{\partial \pi}{\partial x_3} \frac{dx}{\partial x_4} = \frac{\partial \pi}{\partial x_3} \frac{dx}{\partial x_4}$$

$$b_1 = (\widehat{y}_1 - y_1)^2 \times 2^2 \frac{d\pi}{db_1} = \frac{d\pi}{da_1} \frac{da_1}{db_1} = \frac{d\pi}{da_1} \frac{1}{2\sigma^2}$$

$$2\sigma^2$$

$$c_1 = \widehat{y}_1 - y_1$$

$$\frac{d\pi}{dc_1} = \frac{d\pi}{dc_1} \frac{db_1}{dc_1} = \frac{d\pi}{dc_1} \frac{1}{dc_1}$$

$$\frac{d\pi}{dc_1} = \frac{d\pi}{dc_1} \frac{d\theta_1}{dc_1} = \frac{d\pi}{dc_1} \frac{1}{dc_1}$$

$$\theta_1 \frac{d\pi}{d\theta_1} = \frac{d\pi}{d\widehat{y}_1} \frac{d\widehat{y}_1}{d\theta_1} + \frac{d\pi}{dc_1}$$

$$\frac{d\pi}{d\widehat{y}_1} \frac{d\pi}{d\widehat{y}_1} \frac{d\theta_1}{d\theta_1} + \frac{d\pi}{dc_1} \frac{d\pi}{dc_1}$$