$$\frac{L_{MSE}(y,y')}{\partial W} = \frac{1}{N}\sum \frac{(y-y')^2}{\partial y'} * \frac{y'}{\partial W} =$$

$$= -2(y-y') * \frac{\partial y'}{\partial W}\left(\frac{1}{1+e^{-Wx-b}}\right) =$$

$$= 2(y-y') * \frac{20 * x * e^{-Wx-b}}{(e^{-Wx-b}+1)^2}$$

$$\frac{L_{MSE}(y,y')}{\partial x} = \frac{1}{N}\sum \frac{(y-y')^2}{\partial y'} * \frac{y'}{\partial x} =$$

$$= -2(y-y') * \frac{\partial y'}{\partial x}\left(\frac{1}{1+e^{-Wx-b}}\right) =$$

$$= -2(y-y') * \frac{20 * W * e^{-Wx-b}}{(e^{-Wx-b}+1)^2}$$

$$\frac{L_{MSE}(y,y')}{\partial b} = \frac{1}{N}\sum \frac{(y-y')^2}{\partial y'} * \frac{y'}{\partial b} =$$

$$= -2(y-y') * \frac{\partial y'}{\partial b}\left(\frac{1}{1+e^{-Wx-b}}\right) =$$

$$= -2(y-y') * \frac{20 * e^{-Wx-b}}{(e^{-Wx-b}+1)^2}$$