$$\frac{\partial}{\partial m} + \frac{\partial}{\partial m} \sum_i^N (mx_i - y_i)^2$$

$$= \sum_i^N 2(mx_i - y_i) \frac{\partial}{\partial x}(mx_i - y_i)'$$

$$= \sum_i^N 2(mx_i - y_i) \cdot x_i$$

$$= 2 \sum_i^N x_i (mx_i - y_i)$$

$$\frac{\partial}{\partial m} MSE = 0 \Rightarrow 2 \sum_i^N x_i (x_i m - y_i) =$$

$$m_0 = \frac{\sum_i^N x_i y_i}{\sum_i^N x_i^2}$$