

Theory

$$\sum_{i=1}^n (y_i - (ax_i + b))^2$$

$$\frac{d}{dx} [(y_i - (ax_i + b))^2]$$

$$2(ax + b + y) \frac{d}{dx} (-ax - b + y)$$

$$2(-ax - b + y)(-a)$$

$$\sum_{i=1}^n [-2a(ax - b + y) = 0]$$