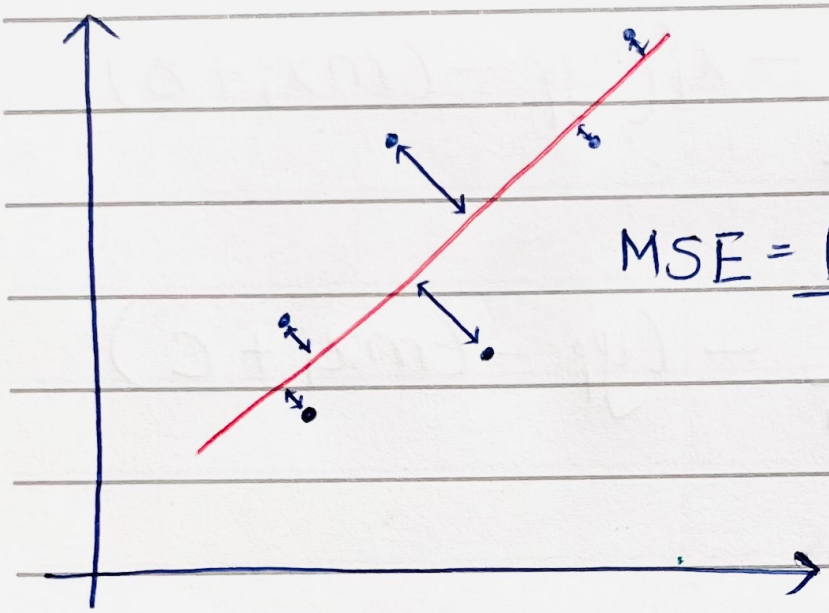
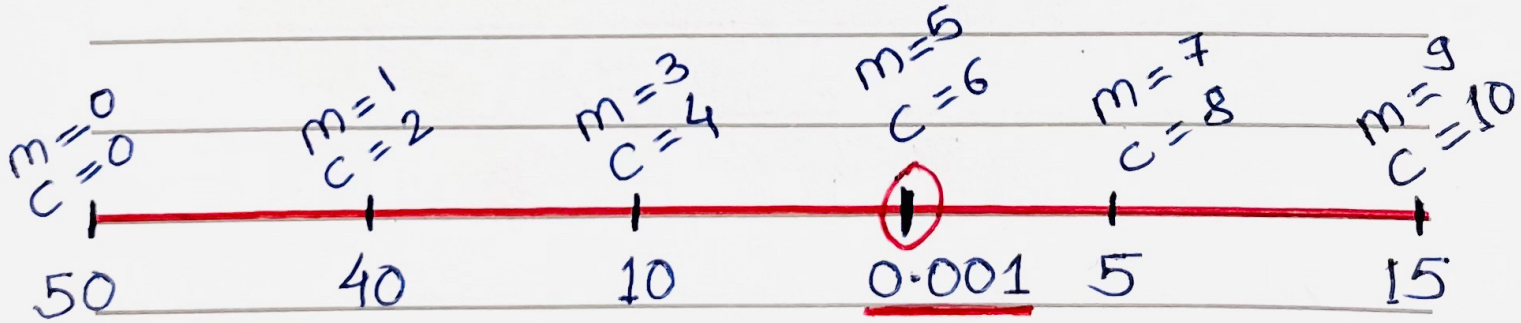
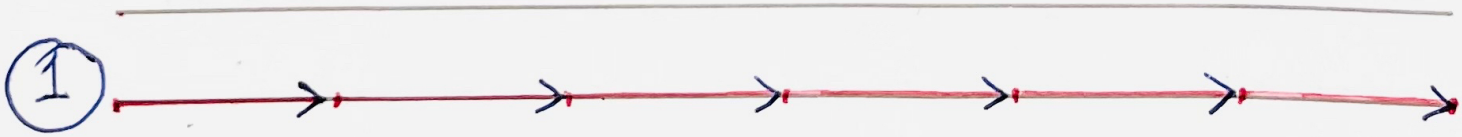


$$MSE = \frac{1}{n} \sum_{i=1}^{n} (y_i - y_p)^2$$

$$y_p = mx + c$$

$$\rightarrow MSE = \frac{1}{n} \sum_{i=1}^{n} (y_p - (mx_i + c))^2$$





$$md = \frac{2}{n} \sum_{i=1}^{n} -x_i (y_i - (mx_i + c))$$

$$cd = \frac{2}{n} \sum_{i=1}^{n} -(y_i - (mx_i + c))$$

$$m = m - LR * md$$

$$c = c - LR * cd$$