

STAT 200 10-5-09

- * NORMAL & Dim + 2 Dim (TOTALLY NORMAL)
- * REGULAR μ, σ IN $N(\mu, \sigma)$ (TEXT) $N(\mu, \sigma^2)$
- * KNOW ITEMS ASSOC^d WITH 2 Dim NORMAL PLOT STANDARD
- * KNOW MEANING OF LEAST SQUARES.

RE: CALCULATIONS

- * GET \bar{x}, \bar{y} , & CORRELATION) FROM YOUR CALCULATOR.
- * KNOW SLOPE OF LEAST SQUARES LINE $b_1 = r \frac{s_y}{s_x}$
- * KNOW INTERCEPT $b_0 = \bar{y} - b_1 \bar{x}$?



2 Dim Plot. IF DATA IS FROM 2 Dim Normal.



• $x = \text{NT TRAYER}$
 $y = \text{NT SEN}$

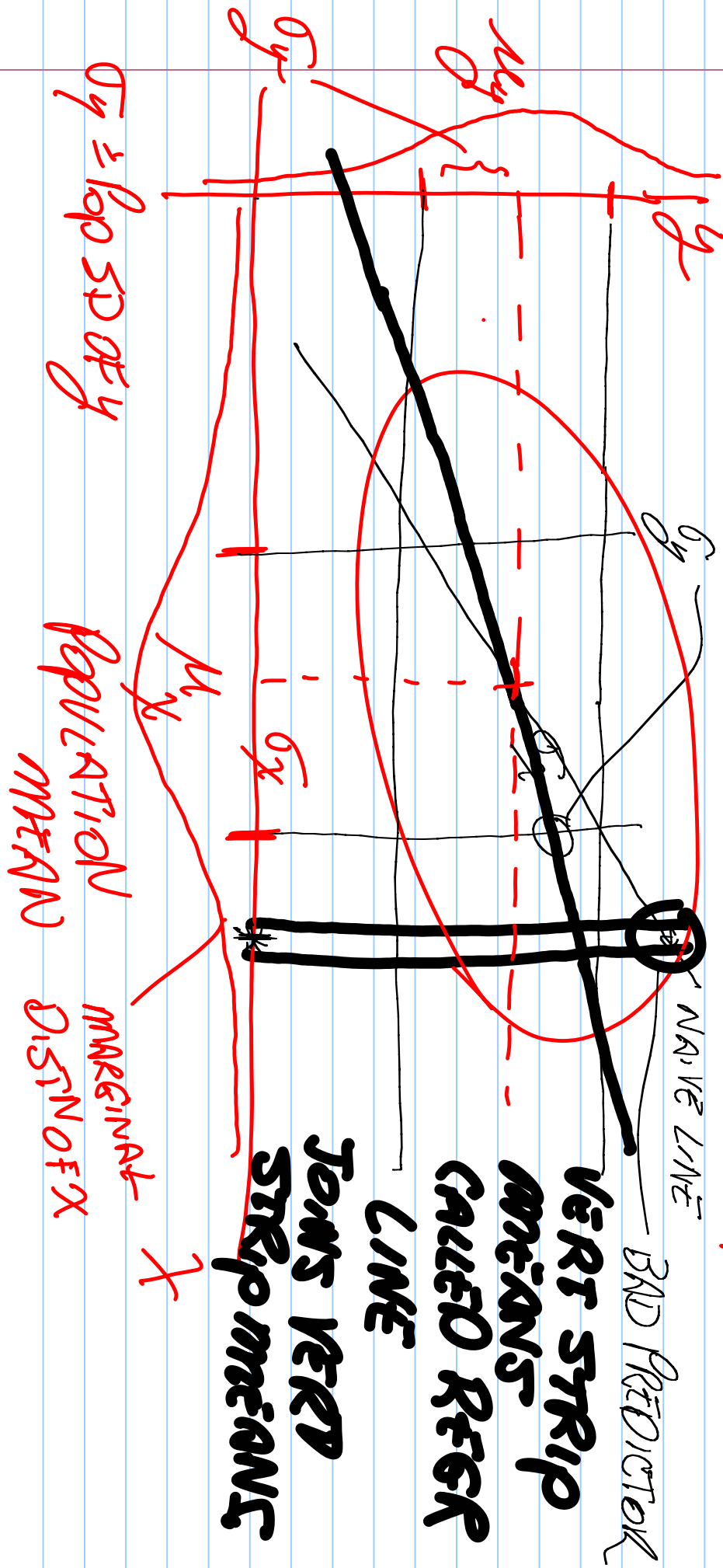
" LINE " IF OPTIMAL PREDICTOR OF y FOR GIVEN x .

SLOPE OF THIS LINE = $R \frac{dy}{dx} / dx$

$$R = \frac{\overline{xy} - \bar{x}\bar{y}}{\sqrt{\overline{x^2} - \bar{x}^2} \sqrt{\overline{y^2} - \bar{y}^2}}$$



CORRELATION DÉFINÉ MS ABOVE - SOME
 CORRELATION BY ALL THE DIFFERENT RECIPES



VERT STRIP
 MEANS
 CALLED REGR
 LINE

HORIZ STRIP
 MEANS

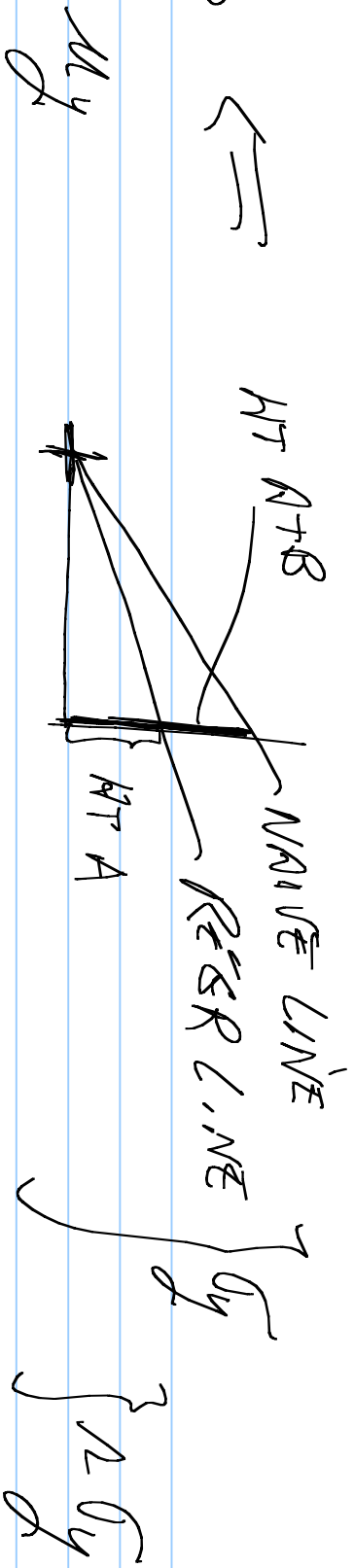
POPULATION
 MEAN

MARGINAL
 DISTRIB

$\sigma_y = \text{Pop SD of } y$

x

$$\lambda = \frac{A}{A+B} \leftarrow$$



$$M_x \quad M_x + \delta_x \quad \text{SO RATIO}$$

$$\frac{\lambda \delta_y}{\delta_y} = \lambda$$

SO ABOVE $\lambda \approx 0.5$

COSTE EXAMINATION OF ABOVE ACTUAL
NORMAL PLOD GIVES $\lambda \approx 0.42$.

