Chapter X.
Empirical formula.
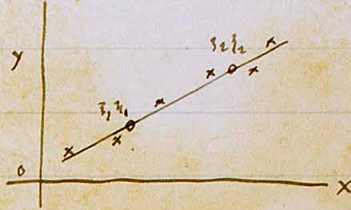
十食, 回外委.

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揺.

$$y = a + bx.$$

実験公式ノ意味.

x	x_1	x_2	$x_3 \cdots x_n$
y	y_1	$y_2 \cdots y_3 \cdots y_n$	

$$\begin{cases} \gamma_1 = a + b\xi_1, \\ \gamma_2 = a + b\xi_2. \end{cases}$$

$a =$

$b =$

Ex. 銅ノ棒ノ電気抵抗ヲ γ「ミリオーム」, 温度ヲ摂氏 t トナス.

$$\gamma = a + bt$$

t	γ	計算 γ'	誤差 $(\gamma - \gamma')$
19,1	76,30	+0,11
25,0	77.80	-0,11
30,1	79,75	+0,36
36,0	80,80	-0,31
40,0	82.35	+0,68
45,1	83,90	+0,15
50,0	85,10	-0,08

$$\begin{cases} t = 20, \\ \gamma = 76.45 \end{cases}$$

$$\begin{cases} t = 48 \\ \gamma = 84.60 \end{cases}$$

$$76.45 = a + 20b,$$
$$84.60 = a + 48b.$$

$$a = 70,63 \qquad b = 0,291$$

Exercises.

42 無.
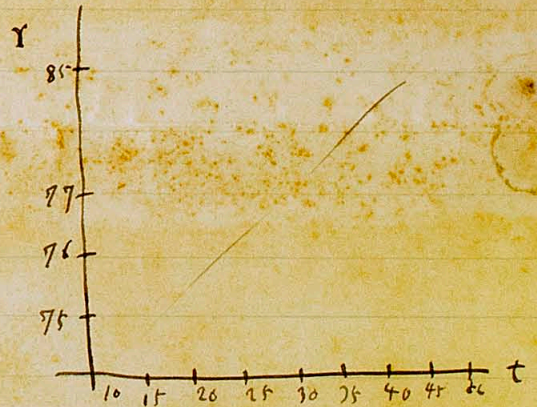
$$y = ax^b.$$

$$\log_{10} y = \log_{10} a + b \log_{10} x.$$

$$\begin{cases} z = \log_{10} x. \\ \eta = \log_{10} y. \end{cases} \qquad \eta = \log_{10} a + bz.$$

~~XXXXXXXX~~ Ex. $A = \pi r^2.$

對數方眼紙.

Ex. 1. $A = \pi r^2.$

Ex. 2. 實驗公式ノ應用.
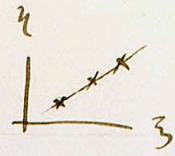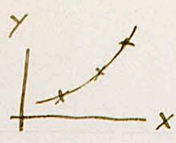
43. $\quad y = a\,e^{bx}.$

44. $y = a + bx + cx^2,$ $y = a + bx + cx^2 + dx^3, \dots$

45. $y = \dfrac{x}{a + bx}.$

Exercises.

$$y = a \sin\frac{2\pi x}{T} + b \cos\frac{2\pi x}{T} \quad \left(回知 T \text{八} 阮 知 \right)$$

$$\left(z = tg\frac{2\pi x_k}{T}, \; \eta = y_k \sec\frac{2\pi x_k}{T}. \right)$$