Linear Regression Analysis for Horton's Eq. (infiltration).

$$f_p = f(t) = f_c + (f_o - f_c)e^{-kt}$$

k (or K in literature) = recession constant, t^{-1}

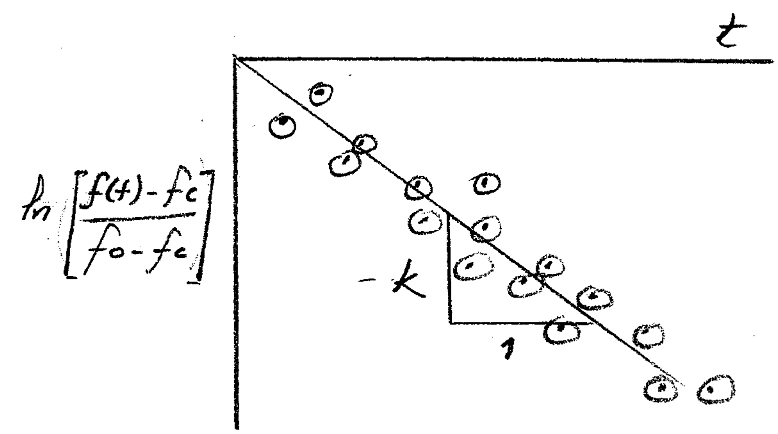
f_c = final constant infiltration rate (in/h)

f_o = initial infiltration capacity (in/h)

$$\therefore \quad \frac{f(t) - f_c}{f_o - f_c} = e^{-kt}$$

, where $f(t)$, f_o, f_c and t are obtained from a field test.

$$\underbrace{\ln\left[\frac{f(t) - f_c}{f_o - f_c}\right]}_{Y} = \underbrace{-kt}_{MK}$$



r^2 = index of determination

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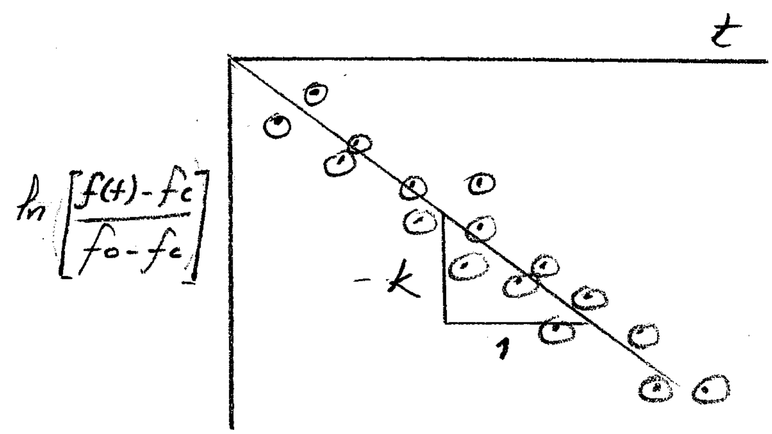

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