

Whittingehame Lodge,  
44 Storey's Way,

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15 September 1944

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Dear Whately Carington,

I can only suggest that you should use a fitting formula

$$y = C + Ae^{-Bx},$$

where the constants A, B and C are adjusted so that the sum for the whole square is zero, i.e. C must be negative so that Ae<sup>-Bx</sup> is everywhere positive. Of course, this introduces a most undesirable complication, but with much trouble the thing could be fitted. With respect to weights of logs, I suppose, if V(x) is the variance of x, then

$$V(\log x) = \frac{1}{(B)^2} V(x),$$

where  $\bar{x}$  is the expected value of  $x$ ; and the weights should be the inverses of the variances.

A test of significance performed on logs of other functions should be precisely the same as one performed on the original quantities, and I often use this principle in deciding whether various approximations, such as assuming that human stature is normally distributed when, of course, it cannot really be, are good enough for practical purposes.

Sorry to be so brief.

Yours sincerely,