values p_1 and p_2 for a given n and c can be calculated, using a table of the 5 per cent points of the F (variance ratio) distribution. We may take

$$n_1 = 2(n - c)$$

$$n_2 = 2(c + 1)$$

$$F_1 = F(n_1, n_2)$$

$$F_2 = F(n_2, n_1).$$

Then

$$p_1 = \frac{n_2}{n_2 + n_1 F_1}$$

and

$$p_2 = \frac{n_2 F_2}{n_1 + n_2 F_2},$$

utilizing a property of the F distribution pointed out in [3], page 2.

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ON AN EQUATION OF WALD

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Let $X_1, X_2, \cdots$ be a sequence of independent chance variables with a common expected value a, and let $S_1, S_2, \cdots$ be a sequence of mutually exclusive events, S_k depending only on $X_1, \cdots, X_k$, such that $\sum_{k=1}^{\infty} P(S_k) = 1$. Define the chance variables $n = n(X_1, X_2, \cdots) = k$ when S_k occurs and $W = X_1 + \cdots + X_n$. We shall consider conditions under which the equation

$$E(W) = aE(n), \tag{1}$$

due to Wald [3, p. 142], holds.

This equation has various interpretations:

A. n may be considered as defining a sequential test on the X_i. If a and $E(W)$ are known, (1) may be used to determine $E(n)$, the expected number of observations required by the sequential test, [3, p. 142 et seq].

B. n may be considered as representing a gambling system, i.e. it represents the point at which a player decides to stop. W then represents his winnings,