Let $f(n)$ denote the total number of decision patterns for n means. Clearly,

$$f(n) = f_0(n) + f_1(n), \tag{2.4}$$

since s_0 and s_1 are the only possible first steps.

Since $f(n)$ depends only on $f_0(n)$ and $f_1(n)$, equations (2.1), (2.2), and (2.3), together with the boundary conditions

$$f_0(1) = f_0(2) = f_1(2) = 1, \tag{2.5}$$

will lead to (1.1).

Using standard techniques for solving difference equations, it can be shown that[3]

$$f_e(k) = \frac{2e+1}{e+k}\binom{2k-2}{k+e-1}. \tag{2.6}$$

This result can be verified by substituting (2.6) into equations (2.1), (2.2), (2.3), and (2.5). It follows immediately that

$$f(n) = f_0(n) + f_1(n) = \frac{1}{n+1}\binom{2n}{n}.$$

PERCENTILES OF THE ω_n STATISTIC[1]

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If n points are selected independently from a uniform distribution on a unit interval there arise $n + 1$ subintervals, each of expected length $1/(n + 1)$. If L_k is the length of the kth interval from the left, then

$$\omega_n = \tfrac{1}{2}\sum_{k=1}^{n+1}\left|L_k - \frac{1}{n+1}\right|.$$

The distribution function of ω_n is 0 for $x < 0$, 1 for $x > n/(n + 1)$, and for $0 \leqq x \leqq n/(n + 1)$

$$F_n(x) = b_n x^n + b_{n-1}x^{n-1} + \cdots + b_1 x + b_0 + 1,$$

where

$$b_k = \sum_{q=0}^{r}(-1)^{q+k+1}\binom{n+1}{q+1}\binom{q+k}{q}\binom{n}{k}\left(\frac{n-q}{n+1}\right)^{n-k},$$

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