the definition of g, we have $g'' < F(1 - F)x_0 - 4x_0f^2 < -2x_0f^2 < 0$, which is impossible. Hence, g is nonnegative for all positive x, which completes the proof.

Lemma 2. *$F(1 - F) \geqq \pi f^2/2$ for $0 \leqq x < \infty$ with equality at 0 and ∞.*

Proof. Let $h = F(1 - F) - \pi f^2/2$. Then,

$$h' = f(1 - 2F) + \pi x f^2, \qquad h'' = f^2(\pi - 2 - 2\pi x^2) - xf(1 - 2F). \tag{2}$$

It may be shown that h is continuous with derivatives of all order, $h(0) = h(\infty) = 0$, $h'(0) = 0$, and $h''(0) > 0$. Let y_0 be an extremum of h. Then, from (2) $h'' = f^2(\pi - 2 - \pi y_0^2)$ at the point y_0. Hence, $y_0 \leqq (\pi - 2)^{\frac{1}{2}}/\sqrt{2}$ if y_0 is a minimum and $y_0 \geqq (\pi - 2)^{\frac{1}{2}}/\sqrt{2}$ is y_0 is a maximum, so that if a minimum and a maximum both exist, the minimum must precede the maximum. In view of this circumstance it is evident from the above mentioned properties of h, h' and h'' that a minimum cannot exist, and therefore that h is nonnegative for all positive x.

The results of Lemmas 1 and 2 can be rewritten respectively as

$$\left(F + \frac{f}{x} - \frac{1}{2}\right)^2 \geqq \left(\frac{f}{x} - \frac{1}{2}\right)^2 + \frac{f}{x}, \tag{3}$$

$$\left(F - \frac{1}{2}\right)^2 \leqq \frac{1}{4} - \frac{\pi}{2}f^2. \tag{4}$$

For $x \geqq 0$ the upper bound of the theorem is obtainable from (3) and the lower bound from (4).

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CORRECTION TO "SOME NONPARAMETRIC TESTS OF WHETHER THE LARGEST OBSERVATIONS OF A SET ARE TOO LARGE OR TOO SMALL"*

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This note calls attention to the fact that Theorem 4 of this paper (*Annals of Math. Stat.*, Vol. 21 (1950), pp. 583–592) is only partially correct. The results $\lim_{\Phi\to-\infty} P_1(\Phi) = 0$ and $\lim_{\Phi\to-\infty} P_3(\Phi) = 1$ as well as the monotonicity properties

* Received 1/29/52, revised form 9/19/52.