to deduce the probability law (1) from the so-called principle of the arithmetic mean,—as the "most probable value." The argument referred to is that which first sets up

$$F(z) = \varphi(z - x_1)\varphi(z - x_2) \cdots \varphi(z - x_n)dy_1dy_2 \cdots dy_n$$

as the probability that, with z as the true value, the measurements $x_1, x_2, \cdots, x_n$, *will be* made; then attempts to regard this same expression as also proportional—or even equal—to the probability that z is the true value, the measurements $x_1, x_2, \cdots, x_n$, *having been* made; and then sets $dF/dz = 0$.

UNIVERSITY OF TEXAS,
December, 1912.

SHORTER NOTICES.

Die partiellen Differential-Gleichungen der mathematischen Physik. Nach Riemann's Vorlesungen in fünfter Auflage bearbeitet von HEINRICH WEBER. Zweiter Band. Braunschweig, Vieweg und Sohn, 1912. xiv+575 pp. Unbound 15 marks, bound 16.80 marks.

THE first volume of the fifth edition of this classic work was reviewed in this BULLETIN, volume 18, page 87, and the fourth edition in volume 8, page 81. Little need be added to these. The most noteworthy addition to the present volume is the entire section 18, devoted to relativity. This section contains thirty pages. The introduction points out the nature of time and that relativity is not really concerned with time but with the measure of time, or rather with the connection between time and space quantity. The succeeding sections are sufficiently described by their titles: time and space in the stationary and the moving world; normal form of the transformation of axes; constant velocity of light; significance of the Lorentz transformation; the fundamental electromagnetic equations for bodies at rest; the fundamental electromagnetic equations for moving bodies; invariancy of the equations; explicit form of the equations; transformation of the force and the displacement; the Michelson-Morley experiment; application of the relativity theory to the Michelson-