ing that number of dollars by F_2, representing the price of food in Case 2. The result is $\frac{S_2\phi_2}{F_2}$. Numerically this result (since we suppose F_2, the average price of food in Evenland, to be \$1 a "pound") becomes \$300÷\$1, or 300 "pounds," or food units.

We now cross over the sea to "Oddland" and study Case 1. As stated in our hypothesis we have assigned to our family, Case 1, the same number of food units as in Case 2. Or, to be more exact, we have allotted to Case 1 such an income as would lead it to choose of its own free will (in view of all the costs of living for food, clothing, housing, and all the rest obtaining in Oddland), the very same (or equally desirable) food as Case 2 buys in Evenland (at quite different prices and out of a quite different income). It follows that the food of Case 1 must be also 300 lbs. Algebraically expressed the food of Case 1 is $\frac{S_1\phi_1}{F_1}$, so that $\frac{S_1\phi_1}{F_1} =$ 300 "pounds."

From this we can compute S_1 as soon as we know ϕ_1 and F_1. We know that F_1, by hypothesis, is \$1.33⅓; *i.e.*

$$F_1 = \$1.33\tfrac{1}{3},$$

Multiplying this by the last result, namely

$$\frac{S_1\phi_1}{F_1} = 300 \text{ we obtain } S_1\phi_1 = 400.$$

which is the money paid for food by Case 1.

We next find ϕ_1. The family budget tables in Oddland show, let us say, that a family which spends \$400 for food is one which spends thereon 40% of its total expenditure; that is, $\phi_1 = .40$.

It is now evident that the total expenditure in Case 1 can readily be found by dividing the expenditure for food

$$S_1\phi_1 = \$400 \text{ by } \phi_1 = .40 \text{ giving } S_1 = \$1000.$$

Thus, beginning with $S_2 = \$600$, we have ended our chain of calculations with a figure for S_1, which was the object of our search. That is $S_1 = \$1000$.

The above process, or chain of calculations by which S_1 is found from S_2, may be tabulated as follows: