(5.9) $$W(t) = \frac{t}{1 - t - t^2} = \sum_{n=0}^{\infty} F_n t^n \quad .$$

The two generating functions W(t) and Y(t) are related by the expression

(5.10) $$W(t) = \int_0^{\infty} e^{-z}\, Y(tz)\, dz \quad .$$

REFERENCES

1. L. M. Milne-Thompson, The Calculus of Finite Differences, London, 1933.
2. C. Jordan, Calculus of Finite Differences, New York, 2nd Ed., 1947.
3. S. Goldberg, Introduction to Difference Equations, New York, 1958.
4. G. Boole, Calculus of Finite Differences, New York, 4th Ed., 1926.

PROBLEM DEPARTMENT

P-1. The recurrence relation for the sequence of Lucas numbers is

$$L_{n+2} - L_{n+1} - L_n = 0 \text{ with } L_1 = 1, \; L_2 = 3 \; .$$

Find the transformed equation, the exponential generating function, and the general solution.

P-2. Find the general solution and the exponential generating function for the recurrence relation

$$y_{n+3} - 5y_{n+2} + 8y_{n+1} - 4y_n = 0 \; ,$$

with $y_0 = 0, \; y_1 = 0, \; y_2 = -1.$

REQUEST

Maxey Brooke would like any references suitable for a Lucas bibliography. His address is 912 Old Ocean Ave., Sweeny, Tex.