

is LD by Theorem 2-(i), and so F_n is LD by Theorem 2-(iv).

Theorem 3 is easily extended to other recurrence sequences.

It should also be noted that examples can be constructed which show that

$$\{a_n\} \quad \text{and} \quad \{\beta_n\}$$

LD does not imply that any of

$$\{a_n^{1/k}\}, \quad \{a_n \beta_n\}, \quad \text{or} \quad \{a_n + \beta_n\}$$

are LD. It might be interesting to obtain necessary and/or sufficient conditions for these implications to hold.

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[Continued from P. 333.]

if and only if

$$(-1/a) \neq (-1/b) = -1;$$

$$((-1/a)/(-1/b)) = -1$$

if and only if

$$(-1/a) \neq (-1/b) = 1;$$

$$((-1/-a)/(-1/-b)) = -1$$

if and only if

$$(-1/a) = (-1/b) = 1.$$

Now stipulate that

$$(a/-1) = (b/-1) = 1.$$

Then, by the classic Law of Quadratic Reciprocity,

$$(1) \quad (a/b)(b/a) = ((-1/a)/(-1/b)).$$

But

$$(-a/b) = (a/b)(-1/b)$$

and

$$(b/-a) = (b/a)(b/-1).$$

Since $(b/-1) = 1$, therefore

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