## T. Richard Carson

Periodic recurrence relations and continued fractions, Fibonacci Quart. 45 (2007), no. 4, 357-361.


#### Abstract

The Fibonacci series represents the simplest series whose successive members obey a periodic 3 -term relation, wherein the coefficients and the period are all equal to 1 . Here the most general case where these parameters are all arbitrary is treated. For a series of quantities or elements, related by a periodic 3 -term recurrence relation between adjacent elements, it is shown that there is also a 3 -term invariant recurrence relation between corresponding elements within adjacent periods. Application to the numerators and denominators of the convergents of a periodic continued fraction follows naturally.


