# A PROBLEM CONCERNING THE FIBONACCI RECURRENCE (6)

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Let S(n) be defined as the smallest integer such that (S(n))! is divisible by n (Smarandache Function). For what triplets this function verifies the Fibonacci relationship, i.e. find n such that

$$S(n) + S(n+1) = S(n+2) \ ?$$

*Solution*:

Checking the first 1200 numbers, I found just two triplets for which this function verifies the Fibonacci relationship:

$$S(9) + S(10) = S(11) \Leftrightarrow 6 + 5 = 11,$$

and

$$S(119) + S(120) = S(121) \Leftrightarrow 17 + 5 = 22.$$

How many other triplets with the same property do exist ?
(I can't find a theoretical proof ...)

*Reference*:

M. Mudge, "Mike Mudge pays a return visit to the Florentin Smarandache Function", in <Personal Computer World>, London, February 1993, p. 403.