

Final exam.

Let f be the *Fibonacci function* given by the following scheme: $f(0) = 1$, $f(1) = 1$ and $f(n+2) = f(n+1) + f(n)$ for every $n \geq 0$.

1. Identify a Σ_1 formula defining f .
2. Show that f is primitive recursive.
3. Find a Post system computing the function f .
4. Show that the function $g(x, y)$ = the largest common factor of x, y is computable.
5. Show that the function $h(x) = 1$ if x is a prime and $h(x) = 0$ otherwise, is computable.