Recurrence Relations

Work in Progress: Write definition, check grammary, is Fib correct? How to mark the "solution" part? Rewrite normally the "solution" part. Mb is it possible to deal with russian? Make arrows for **solve** *etc.*

Example: Fibonacci's numbers is a reccurence relation were each number is the summary of the two precedent and the first two are 0 and 1:

$$\begin{cases} F_n = F_{n-1} + F_{n-2} \\ F_0 = 0 \\ F_1 = 1 \end{cases}$$

$a_n = a_{n-1} + 5$

arrow*sooolve???*

The solution of a reccurency is the *closed-form expression* of the n^{th} member of the reccurency based on the first, so the calculation may be done in O(1), not in O(n).

arrow*methods*

Methods

1. Guessing method.

2. Telescoping method.

3. Iteration method.

4. Characteristic equation.