

**Homework Problems Mat 331**  
**Set no. 2 October 17, 2003**  
**Due October 24, 2003**

- (1) Write a procedure to generate the Fibonacci numbers, which are defined by

$$F(n) = \begin{cases} F(n-1) + F(n-2), & \text{if } n > 2; \\ 1, & \text{if } n = 1 \text{ or } n = 2 \end{cases}$$

We implemented the recursive procedure in class (see worksheets Oct17.mws). Implement a non-recursive procedure.

- (2) The Irby numbers are defined by

$$I(n) = \begin{cases} I(n-9) + I(n-10), & \text{if } n > 10; \\ n, & \text{if } 0 \leq n \leq 10 \end{cases}$$

- Implement a recursive procedure.
- Implement a non-recursive procedure.