

Corrigé

1. a) théorie

b) fonction nber (n: integer): integer;

// n : nombre donné

// nber : nombre premier $\leq n$

var i: integer;

begin

 i := n;

 while i > 0 do

 begin

 if prime(i) = true then

 begin

 nber := i;

 i := 0;

 end;

 i := i - 1;

 end;

 end;

2. a) A B (A) C U S

 candidat ← A

A B B C U S

A A B (C) U S

 candidat ← C

A A B C (U) S

 candidat ← U

A A B C U (S)

 candidat ← S

A A B C U → U

A A B C S U

b) cours (théorie)

3.

$$\begin{aligned} \text{a) } n=10 \quad m=3 & : f = 10 \cdot f(5, 3) + 3 \\ n=5 \quad m=3 & = 10 \cdot [3 \cdot f(2, 2)] + 3 \\ n=2 \quad m=2 & = 10 \cdot [3 \cdot (2 \cdot f(1, 2) + 2)] + 3 \\ n=0 & = 10 \cdot [3 \cdot (2 \cdot 1 + 2)] + 3 \\ & = 10 \cdot [3 \cdot 4] + 3 \\ & = 123 \end{aligned}$$

$$\begin{aligned} \text{b) } n=5 \quad m=-2 & f = -2 \cdot f(2, -3) \\ n=2 \quad m=-3 & = -2 \cdot [2 \cdot f(1, -3) - 3] \\ & = -2 \cdot [2 \cdot 1 - 3] \\ & = 2 \end{aligned}$$