Solution Exercice 4 - Série 1

```
Begin
   if a < b * c
    then
      While a <= b*c
       do Begin a :=a+1;
                a := a*c;
          end
    else a := b*c;
end;
```

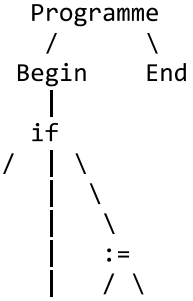
1. Code post-fixé :

```
Block
   a b c * -
   else BPZ
   et1 a b c * -
   et2 BP
   Block
     a a 1 + :=
     a a c * :=
   BlockEnd et1 BR
   et2 Fin BR
   else a b c * :=
Fin BlockEnd
```

2. Quadruplets :

1. (Block, , ,)
2. (*, b, c, T1)
3. (BPZ, 14, a, T1)
4. (*, b, c, T2)
5. (BP, 13, a, T2)
6. (Block, , ,)
7. (+, a, 1, T3)
8. (:=, a, T3,)
9. (*, a, c, T4)
10. (:=, a, T4,)
11. (BlockEnd, , ,)
12. (BR, 4, ,)
13. (BR, 16, ,)
14. (*, b, c, T5)
15. (:=, a, T5,)
16. (BlockEnd, , ,)

3. Arbres abstraits :



```
           /       |  a   *
          /        |     / \
         /         |    b   c
        /          |
       /         while
      /         /   | \
     /         /    |  \
    /         /     |   end
   <         /      |
  / \       /        \
 a   *     <=        Begin
    / \   /  \        /   \
    b  c a    *      :=    :=
             / \    / \    / \
            b   c  a   +  a   *
                      / \    / \
                     a   1  a   c
```