

Algorithme de

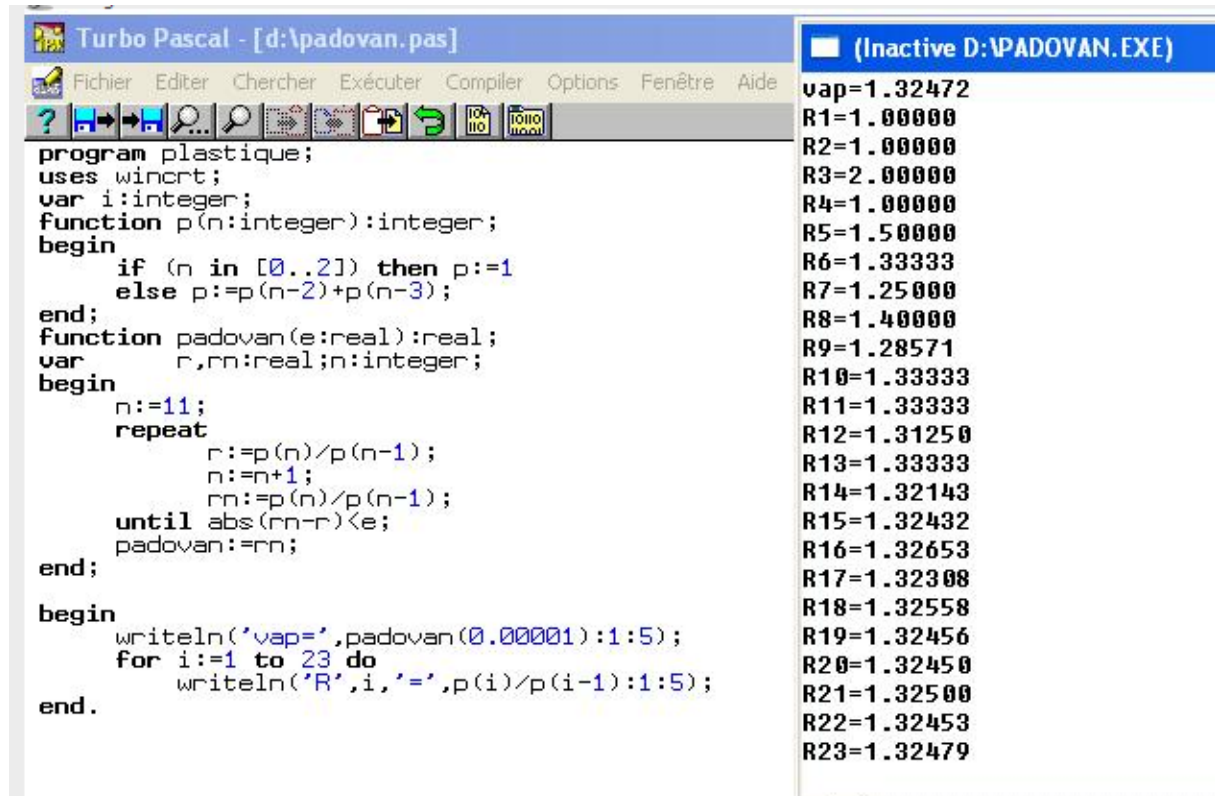
On définit la suite de Padovan P :

$$P_0 = P_1 = P_2 = 1$$

$$P_{N+1} = P_{N-1} + P_{N-2}$$

Le rapport P_{N+1} / P_{N-1} donne une valeur approchée du Nombre de Padovan = 1,324.

Qui est une racine de l'équation $x^3 - x - 1 = 0$



```
program plastique;
uses wincrt;
var i:integer;
function p(n:integer):integer;
begin
  if (n in [0..2]) then p:=1
  else p:=p(n-2)+p(n-3);
end;
function padovan(e:real):real;
var r,rn:real;n:integer;
begin
  n:=11;
  repeat
    r:=p(n)/p(n-1);
    n:=n+1;
    rn:=p(n)/p(n-1);
  until abs(rn-r)<e;
  padovan:=rn;
end;
begin
  writeln('vap=',padovan(0.00001):1:5);
  for i:=1 to 23 do
    writeln('R',i,'=',p(i)/p(i-1):1:5);
end.
```

(Inactive D:\PADOVAN.EXE)

vap=1.32472
R1=1.00000
R2=1.00000
R3=2.00000
R4=1.00000
R5=1.50000
R6=1.33333
R7=1.25000
R8=1.40000
R9=1.28571
R10=1.33333
R11=1.33333
R12=1.31250
R13=1.33333
R14=1.32143
R15=1.32432
R16=1.32653
R17=1.32308
R18=1.32558
R19=1.32456
R20=1.32450
R21=1.32500
R22=1.32453
R23=1.32479