Corrigés Bac Pratique Informatique

Section Math & Sciences & Technique
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Devoirs et examens sur : www.kiteb.net

```
Program Mai26_8h;
Uses wincrt;
Var
 n,m:Integer;
Procedure saisie(var n,m:integer);
 begin
  repeat
   write('N=');
   readln(n);
  until (n>=100);
  repeat
   write('M=');
   readln(m);
  until (m>n);
 end;


Function premier(k:integer):boolean;
var
  nd,i:integer;
begin
  nd:=0;
  for i:=1 to k do
   if k mod i = 0 then
    nd:=nd+1;
  premier:= nd=2;
end;


Function Harshad(n:integer):boolean;
var
  k,x,s:integer;
begin
  s:=0;
  k:=n;
  repeat
   x:=k mod 10;
   s:=s+x;
   k:=k div 10;
  until k=0;
  Harshad:= n mod S = 0;
 end;
```

```
Ou bien
{Function Harshad(k:integer):boolean;
var
  ch:string;
  i,l,x,e,s:integer;
begin
  S:=0;
  str(k,ch);
  l:=length(ch);
  for i:=1 to l do
   begin
    val(ch[i],x,e);
    S:=S+x;
   end;
  Harshad:= k mod S = 0;
 end;}
```

```pascal
Procedure affich(n,m:integer);
var k:integer;
begin
 For k:=n to m do
   if premier(k-1) and harshad(k) then
    writeln(k);
end;

BEGIN
  Saisie(n,m);
  Affich(n,m);
END.
```

```pascal
 For k:=n to m do
   if premier(k-1) and harshad(k) then
    writeln(k);
```

```pascal
Program Mai26_9H30;
Uses wincrt ;
Var
Nb:integer;

Procedure saisie (var Nb :integer);
begin
 repeat
 write ('saisir Nb = '); readln(Nb);
 until (Nb mod 2=0) and (Nb>=4);  odd(nb)=false
end;

Function premier (n:integer):boolean;
var
i:integer;
begin
 i:=2 ;
 While (n mod i<>0 ) and (i<= n div 2) do
   i:=i+1;
 premier := i>n div 2;
end;

Procedure affiche_couple (nb:integer);
var
i:integer;
begin
 for i:=2 to Nb-2 do
  if premier(i) and premier(nb-i) then
    write ( '(', i, ',' , nb-i , ')  ' ) ;
end;

BEGIN
 saisie(Nb);
 writeln ('Les couples de nombres premiers sont : ');
 Affiche_couple(Nb);
END.
```

Ou bien

```pascal
for i:=2 to nb div 2 do
begin
if(premier(i)) and (premier( nb-i)) then
writeln('(',i,',',nb-i,') *** ','(',nb-i,',',i,')');
```

```
Program Mai26_11H;
Uses wincrt;
Type tab=array[1..100]of integer;
Var  n,m:integer;   t,ti:tab;

Function exist(fin:integer; t:tab;
x:integer):boolean;
Var  i:integer;
begin
 i:=1;
 While (t[i]<>x) and (i<=fin) do
  i:=i+1;
 exist := i>fin;
end;

Procedure saisie (var n :integer; var t :tab);
Var  i: integer;
begin
 repeat
  write('n='); readln(n);
 until n in [5..30];
 readln(t[1] );
 for i:= 2 to n do
  repeat
   write('T[',i,'] ='); readln(t[i] );
  until (exist(i-1,t,t[i])) and (t[i]in[1..99]);
end;

Procedure remplir(n:integer; var t:tab; var t1:tab);
Var  i,k,j: integer;
begin
  for i:= 1 to 99 do
   t1[i] := 0;
  for j:= 1 to n do
   t1[t[j]]:=t[j] ;
  k:=0;
   for i:= 1 to 99 do
    if t1[i]<> 0 then
      begin
       k:=k+1;
       t[k]:= t1[i];
      end;
end;

Procedure affiche (n : integer; t: tab);
Var  i: integer;
begin
 for i:=1 to n do
   write(t[i],'|') ;
end;
BEGIN
 saisie(n,t);
 remplir(n,t,tl);
 affiche(n,t);
END.
```

Ou bien
```
Function occurence(n:integer; t:tab;
x:integer):integer;
var
 i,occ:integer;
begin
 occ:= 0;
 for i:= 1 to  n-1 do
  if t[i] =x then
   occ:=occ+1;
 occurence := occ;
end;

  until (occurence (i,t,t[i])=0) and
(t[i]in[1..99]);
```

```
Program Mai26_14H;
Uses wincrt;
Type tab=array[1..25]of integer;
var
n,a,d:integer;
nombre,td,ta:tab;

Procedure saisie(var n:integer;var nombre:tab);
var
i:integer;
begin
 repeat
  write('N='); readln(n);
 until n in [5..25];
 for i:=1 to n do
  repeat
   write('Nombre[',i,']='); readln(nombre[i]);
  until nombre[i]>0;
end;

Function som_div(x:integer):integer;
var
i,s:integer;
begin
 s:=0;
 For i:=1 to x div 2 do
  if x mod i=0 then
   s:=s+i;
 som_div:=s;
end;

Procedure remplire(n:integer;nonbre:tab;var
a,d:integer;var ta,td:tab);
var
i:integer;
begin
 a:=0;d:=0;
 for i:=1 to n do
  begin
   if nombre[i]>som_div(nombre[i]) then
    begin
     a:=a+1;
     ta[a]:=nombre[i];
    end;
   if nombre[i]<som_div(nombre[i]) then
    begin
     d:=d+1;
     td[d]:=nombre[i];
    end;
  end;
end;
```

```
Procedure affiche(n:integer;t:tab);
var
i:integer;
begin
 for i:=1 to n do
  write(t[i],'|');
end;

{programme principal}
BEGIN
 saisie(n,nombre);
 remplire(n,nombre,a,d,ta,td);
 affiche(d,td);
 writeln;
 affiche(a,ta);
END.
```