Solucion 2do Parcial

Computación 1
Facultad de Ingenieria - UdelaR

1   Ejercicio 1

a) 5555
b) 00100
c) 24,0
d) 0 10000000 11000000000000000000000
e) De menor a mayor:
1 10000011 10000000000000000000000 = -24.0
0 10000000 10000000000000000000000 = 3.0
0 10001000 00000000000000000000000 = 512.0

2   Ejercicio 2

a)

```matlab
function w = invertirvector(v)
  lv = length(v);
  w = zeros(1,lv);
  for pos = 1:lv
    w(pos) = v(lv-pos+1);
  end
```

b)

```matlab
function w = crearCapicua(v)
  lv = length(v);
  if lv == 0
    w = [];
  else
    w = [v(1) crearCapicua(v(2:lv)) v(1)];
  end
```

c)

```matlab
function res = esCapicua(v)
  lv = length(v);
  if lv==0 | lv==1
    res = 1;
  elseif v(1)~=v(lv)
    res=0;
  else
    res= esCapicua(v(2:lv-1));
  end
```

3   Ejercicio 3

a)

```matlab
function w=interseccion(u,v)
    nu = length(u);
    nv = length(v);
    i = 1;
    j = 1;
    w = [];
    while i<=nu & j<=nv
        if u(i)==v(j)
            w = [w, u(i)];
            i = i+1;
            j = j+1;
        elseif u(i)>v(j)
            j = j+1;
        else
            i = i+1;
        end
    end
```

b)

```matlab
function z=diferencia(u,v)
    nu = length(u);
    nv = length(v);
    if nu==0 | nv==0
        z = u;
    elseif u(1)==v(1)
            z = diferencia(u(2:nu),v(2:nv));
    elseif u(1)>v(1)
            z = diferencia(u,v(2:nv));
    else
            z = [u(1) diferencia(u(2:nu),v)];
    end
```

4　Ejercicio 4

a)

```
function [maxPar,minImpar]=MaxMinI(An,Af,Ac)
  lA = length(An);
  maxPar = 0;
  minImpar = 0;
  for i = 1:lA
    if mod(Af(i) + Ac(i),2)==0 & maxPar<An(i)
      maxPar = An(i);
    elseif mod(Af(i) + Ac(i),2)==1 & minImpar>An(i)
      minImpar = An(i);
    end
  end
```

b)

```
function [maxPar,minImpar]=MaxMinR(An,Af,Ac)
  lA = length(An);
  if lA==0
    maxPar = 0;
    minImpar = 0;
  else
    [maxPar,minImpar] = MaxMinR(An(2:n),Af(2:n),Ac(2:n));
    if mod(Af(1) + Ac(1),2)==0 & maxPar<An(1)
      maxPar = An(1);
    elseif mod(Af(1) + Ac(1),2)==1 & minImpar>An(1)
      minImpar = An(1);
    end
  end
```