2do Parcial - Soluciones - Diciembre de 2003

Problema 1	10 ptos	

Recursiva:

```
function y = BinToHexaRec(NumBin)
n=length(NumBin);
if n==0
    y = [];
elseif n==1
    b = [2^0];
    y = sum(NumBin(n) .* b);
elseif n==2
    b = [2^1 2^0];
    y = sum(NumBin(n-1:n) .* b);
elseif n==3
    b = [2^2 2^1 2^0];
    y = [sum(NumBin(n-2:n) .* b) ];
else
    b = [2^3 2^2 2^1 2^0];
    y = [BinToHexaRec(NumBin(1:n-4)) sum(NumBin(n-3:n) .* b) ];
end
```

Iterativa

```
function y = BinToHexa(NumBin)
n=length(NumBin);
y = [];
if n==0
    y = [];
else
    for i=n:-4:1
        if i>=4
            b = [2^3 2^2 2^1 2^0];
            y = [sum(NumBin(i-3:i) .* b) y]
        elseif i==3
            b = [2^2 2^1 2^0];
            y = [sum(NumBin(i-2:i) .* b) y];
        elseif i==2
            b = [2^1 2^0];
            y = [sum(NumBin(i-1:i) .* b) y];
        elseif i==1
            y = [NumBin(i) y];
        end
    end
end
```

Problema 2	10 ptos	

```
function y = Flotante(s,e,f)
e=e(:);
f=f(:);
le = length(e);
lf = length (f);
emin = zeros(le,1);
emax = ones(le,1);
fmin = zeros(lf,1);
fmax = ones(lf,1)
M = 2^(le-1) - 1;

if all(e == emin)
    if all(f == fmin)
        y  = 0;
    else
        y = 2 * (-1)^s;
    end
elseif all(e == emax)
    if all(f==fmin)
        y = 3 * (-1)^s;
    else
        y = 4;
    end
else
    y = 1 * (-1)^s;
end
```

Problema 3	20 ptos	

Solución 1

```
function y=horner(P,x)
     y = horner3(P,x,0);


function y=horner3(P,x,hor)
n = length (P);
if (n == 1)
     y = hor + P(1);
else
     hor = (hor + P(1))* x;
     y = horner3(P(2:n),x,hor);
end
```

Solución 2

```
function y=horner(P,x)
n = length (P);
if (n == 1)
      y = P(1);
else
      y = P(n)+(horner(P(1:n-1),x))*x;
end
```

Problema 4	20 ptos	

```
function plata = ej4 (suma,cant)
   plata = zeros(1,10);
   monedas = [1 2 5 10 20 50 100 200 500 1000];
   j = 10;
   while suma > 0
      cj = floor(suma/monedas(j));
      if ~((cant(j) == 0) | (cj == 0))
         if cant(j) > cj
            plata(j) = cj;
            suma = suma - monedas(j)*cj;
         else
            plata(j) = cant(j);
            suma = suma - monedas(j)*cant(j);
         end
      end
      j = j-1;
   end
```