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Problema #1

```
[x1,x2]=ec_grad_2(1,-3,2)
[x1,x2]=ec_grad_2(1,-2,2)
[x1,x2]=ec_grad_2(1,-2,1)
type('ec_grad_2')


x1 =

     2


x2 =

     1


x1 =

   1.0000 + 1.0000i


x2 =

   1.0000 - 1.0000i


x1 =

     1


x2 =

     1


function [x1,x2]=ec_grad_2(a,b,c)
x1=(-b+sqrt(b^2-4*a*c))/(2*a);
x2=(-b-sqrt(b^2-4*a*c))/(2*a);
end
```

Problema #2

```matlab
[y1,y2]=functie(2,0)
xmin=(-1);
xmax=1;
x=linspace(xmin,xmax,100);
for i=1:length(x)
if (x(i)>0)
    y(i)=exp(x(i));
    i=i+1;
elseif (x(i)==0);
    y(i)=exp
    i=i+1;
elseif (x(i)<0)
    y(i)=exp(-x(i));
    i=i+1;
end
end
plot(x,y,'--
r', 'linewidth',3,'MarkerEdgeColor','y','MarkerFaceColor','g','MarkerSize',10)
grid on;
title ('Functie definita pe
 ramuri','FontSize',20,'FontAngle','Italic','Color','r');
xlabel('x','FontSize',25,'Color','r')
ylabel('y','FontSize',25,'Color','r')
legend
type('functie')
```

```
ans =

  logical

   1


y1 =

    7.3891


y1 =

    7.3891


y2 =

     1


function [y1,y2]=functie(a,b)
if a<1
```
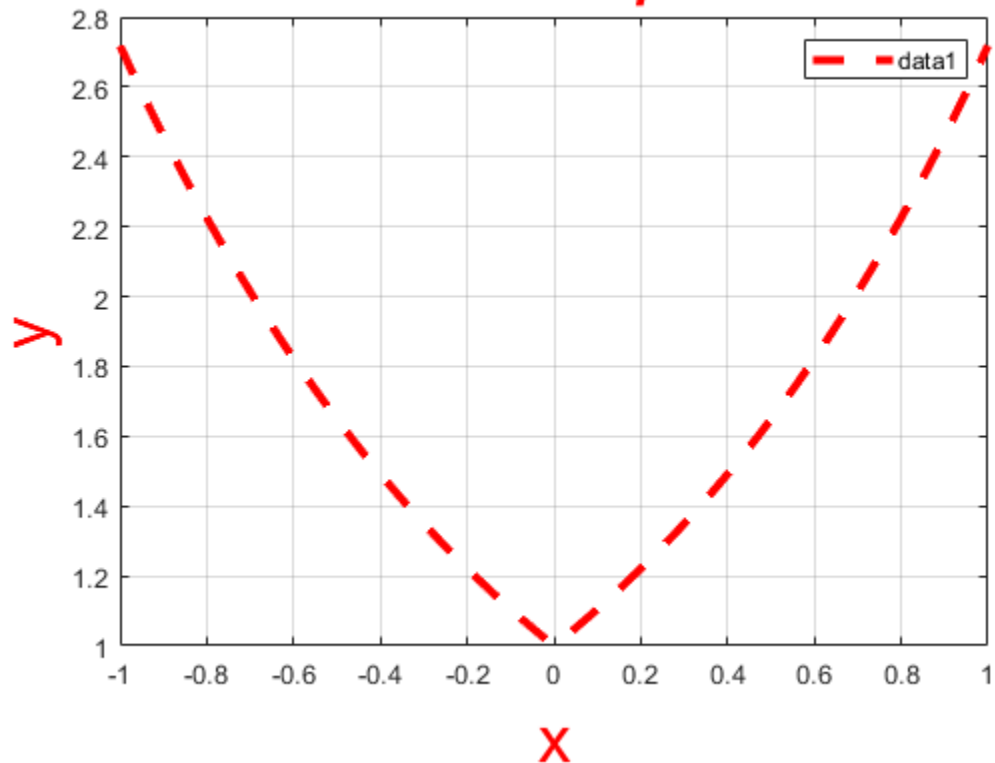
```
    y1=exp(-a);
elseif a==0
    y1=exp;
else a>1
    y1=exp(a)
end
if b<1
    y2=exp(-b);
elseif b==0
    y2=exp;
else b>1
    y2=exp(b)
end
end
```

Functie definita pe ramuri

Problema #3

```
a=[-3 4 7 4 7 -6 0 3 9 0];
%r=randi(500,1,100)
[max,k,p]= maxim(a)
type('maxim')


max =

    -3
```

```
max =

    7


max =

    9


k =

    1


p =

    9


function [max,k,p] = maxim(a)
%a=[-3 4 7 4 7 -6 0 3 9 0];
max=a(1);
i=1;
k=1;
while i<=numel(a)
    if max<a(i)
        max=a(i);
        k=1;
        i=i+1;
    elseif max==a(i)
        max
            k=k+1;
            i=i+1;
    elseif max>a(i)
        i=i+1;
    end
end
i=1;
z=1;
while i<numel(a)
    if max==a(i)
        p(z)=i;
        z=z+1;
        i=i+1;
    else
        i=i+1;
    end
end
end
```

Problema #4

```
a1=[2 3 4 5 6]
[b]=invers(a1)
type('invers')
```

```
a1 =

     2     3     4     5     6


b =

     6     5     4     3     2


function [b] = invers(a1)
k=numel(a1);
i=1;
while i<=numel(a1)
    b(k)=a1(i);
    i=i+1;
    k=k-1;
end
```

Problema #5

```
n1=10;n2=20;n3=30;n=0;ok=0;
S11=0; S12=0; S13=0; S14=0;

%a
for k=1:n1
S11=S11+1/(2^k);
end
for k=1:n2
S12=S12+1/(2^k);
end
for k=1:n3
S13=S13+1/(2^k);
end
S11
S12
S13

%b
S=1;
Ea1=abs(S-S11)
Ea2=abs(S-S12)
Ea3=abs(S-S13)

%c
```

```matlab
Er1=(abs(S-S11))/(abs(S))*100;
Er2=(abs(S-S12))/(abs(S))*100;
Er3=(abs(S-S13))/(abs(S))*100;
F = sprintf('%s\n',repmat('%8g%%',1,6));
fprintf(F,Er1.')
fprintf('\n')
fprintf(F,Er2.')
fprintf('\n')
fprintf(F,Er3.')

%d
while ok==0
    n=n+1;
    S14=S14+1/(2^n);
    Er4=(abs(S-S14))/(abs(S))*100;
    if Er4==3
        n
        ok=1;
    elseif Er4<3
        n
        ok=1;
    end
end


S11 =

    0.9990


S12 =

    1.0000


S13 =

    1.0000


Ea1 =

   9.7656e-04


Ea2 =

   9.5367e-07


Ea3 =

   9.3132e-10
```

```
0.0976563%
9.53674e-05%
9.31323e-08%
n =

     6
```

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