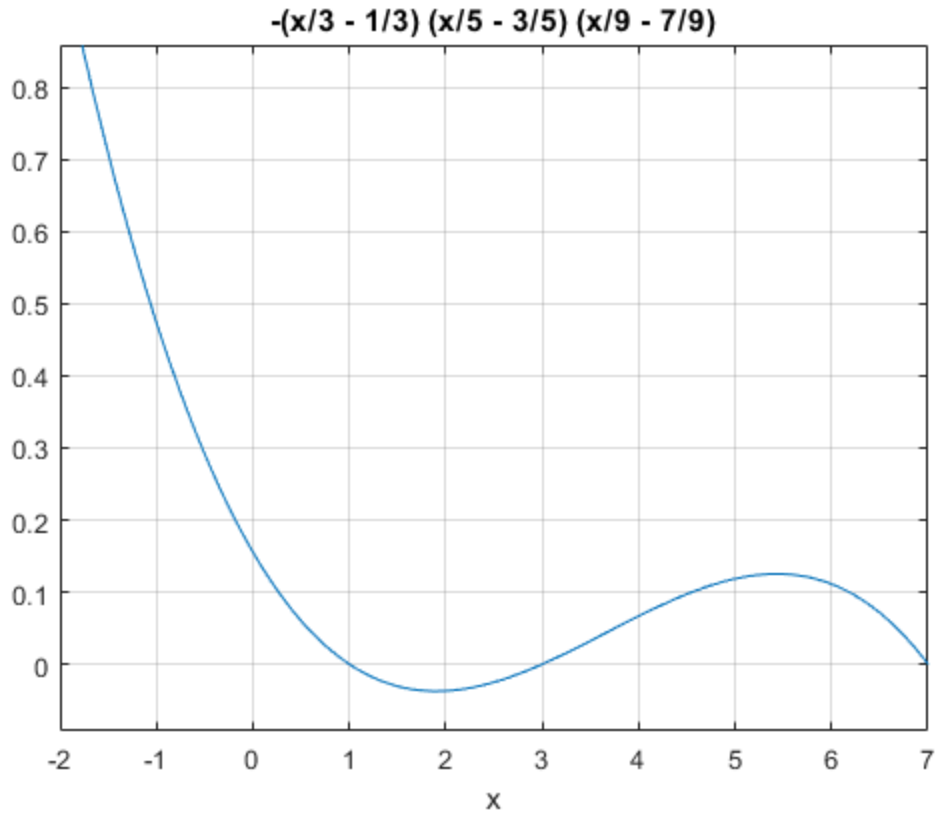
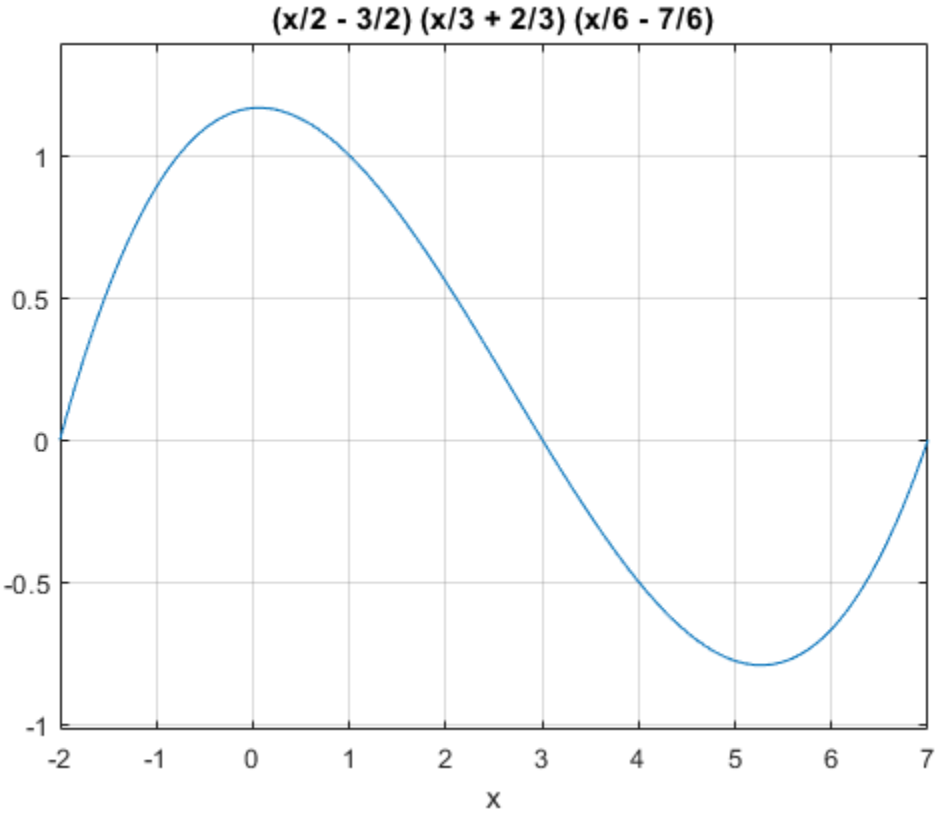
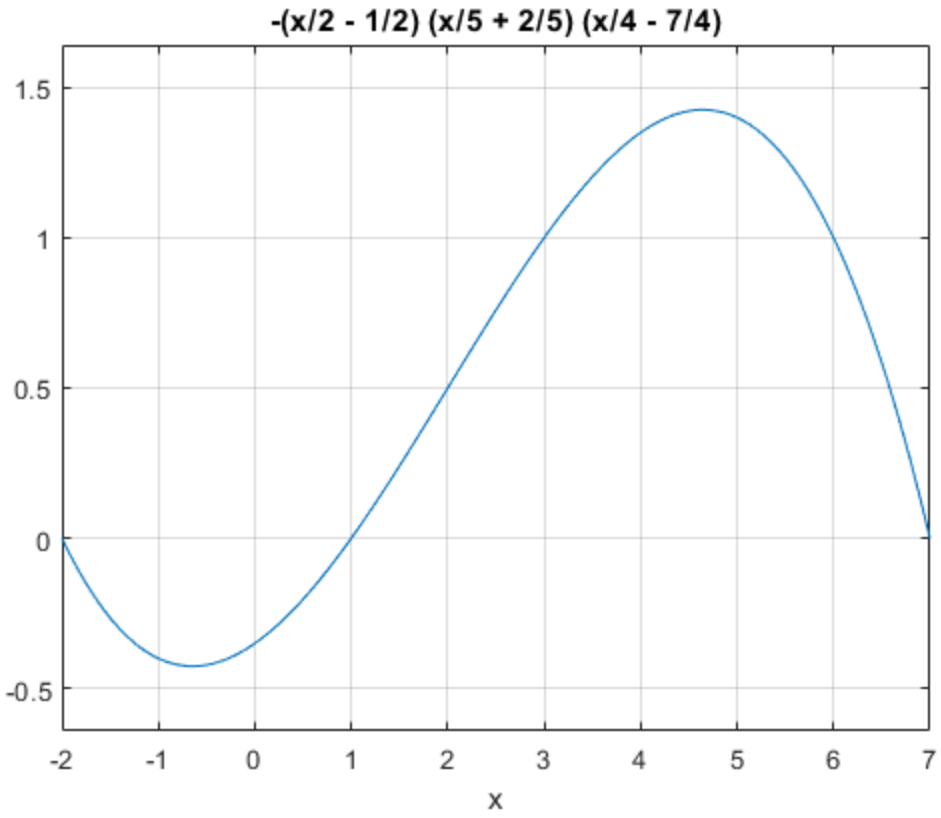
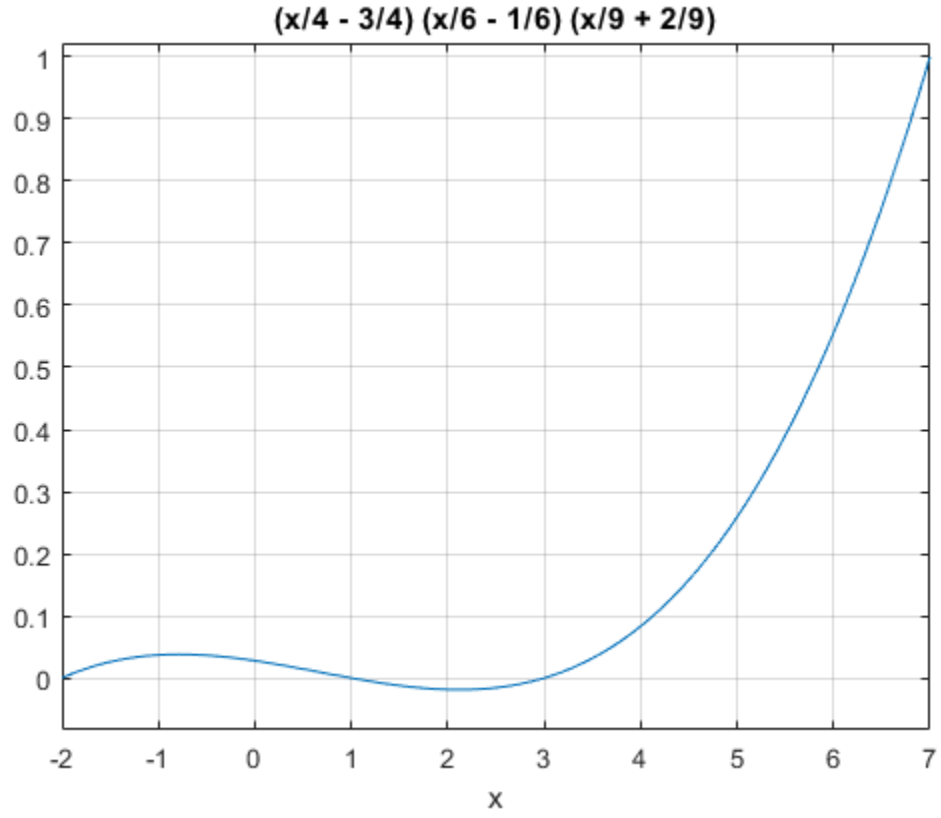
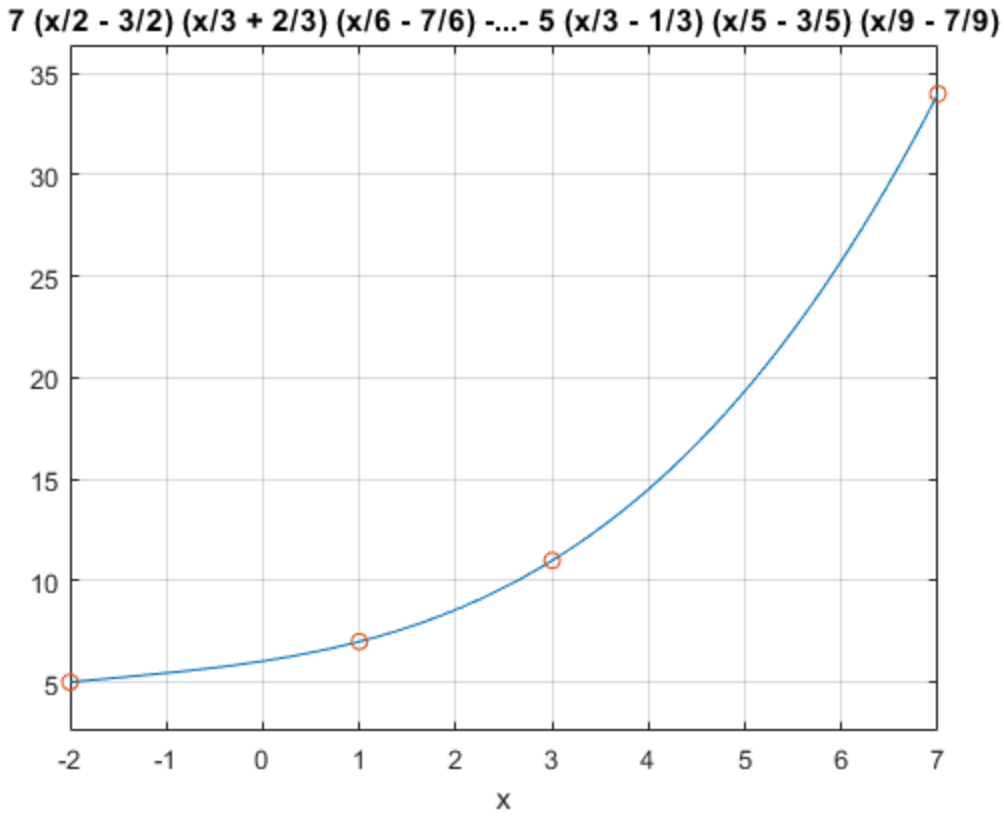
```
%Ex 1 - V2 - a,b

X = [-2 1 3 7];
Y = [5 7 11 34];

Pn=0;

n = length(X);

xmin = -2;
xmax = 7;

syms Lnk x

for k = 1 : n

    produs = 1;

    for i = 1 : n

        if (i~=k)

            produs = produs *((x-X(i))/(X(k)-X(i)));

        end

    end

    Pn = Pn + produs * Y(k); %%Metoda Lagrange

    Lnk = produs;

    figure;
    ezplot(Lnk,[xmin, xmax])

    hold on
    grid on

end

figure
ezplot(Pn,[xmin, xmax])

hold on;
plot(X,Y,"o");

grid on;
axis on;
```


-(x/3 - 1/3) (x/5 - 3/5) (x/9 - 7/9)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
-2
-1
0
1
2
3
4
5
6
7
x

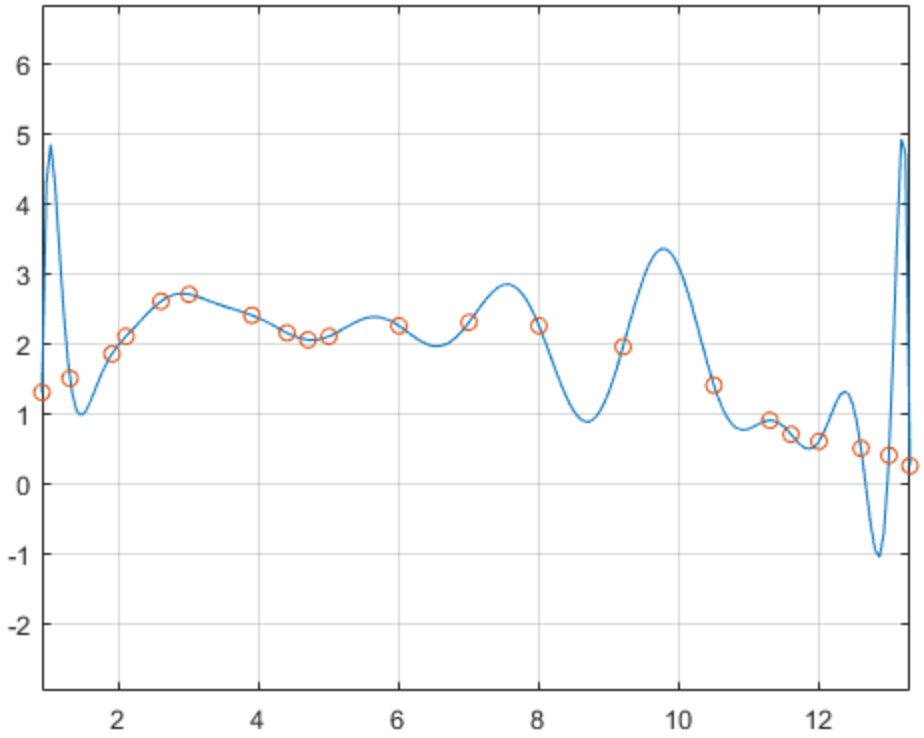

(x/2 - 3/2) (x/3 + 2/3) (x/6 - 7/6)
1
0.5
0
-0.5
-1
-2
-1
0
1
2
3
4
5
6
7
x


-(x/2 - 1/2) (x/5 + 2/5) (x/4 - 7/4)
1.5
1
0.5
0
-0.5
-2
-1
0
1
2
3
4
5
6
7
x


(x/4 - 3/4) (x/6 - 1/6) (x/9 + 2/9)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
-2
-1
0
1
2
3
4
5
6
7
x




```
%Ex 2

X = [0.9 1.3 1.9 2.1 2.6 3.0 3.9 4.4 4.7 5.0 6.0 7.0 8.0 9.2 10.5 11.3
 11.6 12.0 12.6 13.0 13.3];
Y = [1.3 1.5 1.85 2.1 2.6 2.7 2.4 2.15 2.05 2.1 2.25 2.3 2.25 1.95 1.4
 0.9 0.7 0.6 0.5 0.4 0.25];

x = linspace(0.9,13.3,200);

Pn = N(X,Y,x);

figure;

plot(x,Pn, "-")

grid on
hold on
axis equal

plot(X ,Y, "o")

axis equal
```



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