

Cetvrti zadatak

```
type tablica.m
```

```
X=[1.1275 1.1503 1.1735 1.1972];  
Y=[0.11971 0.13957 0.15931 0.17902];  
  
%[appendix]{"version":"1.0"}  
%---  
%[metadata:view]  
% data: {"layout":"onright"}  
%---
```

```
type tablicaCheck.m
```

```
function t=tablicaCheck()  
tablica;  
  
%diff(X)=[X(2)-X(1), X(3)-X(2),...,X(end)-X(end-1)];  
  
r=all(diff(X)>0);  
m=all(diff(Y)>0) || all(diff(Y)<0);  
t=r&& m;  
if r~=1  
    disp('Niz X nije rastuci.')  
end  
if m~=1  
    disp('Niz Y nije monoton.')  
end
```

```
tablicaCheck()
```

```
ans = logical  
      1
```

```
type vredfunk.m
```

```
function vredfunk(x)  
tablica;  
t=tablicaCheck();  
if t==0  
    error('Nisu ispunjeni uslovi zadatka');  
end  
n=length(X);  
prazlike=zeros(n,n-1);  
  
for i=1:n-1  
    prazlike(i,1)=(Y(i+1)-Y(i))/(X(i+1)-X(i));  
end  
  
for j=2:n-1  
    for i=1:n-j  
        prazlike(i,j)=(prazlike(i+1,j-1)-prazlike(i,j-1))/(X(i+j)-X(i));  
    end  
end  
  
disp([X' Y' prazlike]);  
%Ako zelimo samo vrednost polinoma u tacki x  
y=Y(1);  
p=1;
```

```

for i=1:n-1
    p=p*(x-X(i));
    y=y+p*prazlike(1,i);
end
y
%Ako zelimo i koef polinoma
pol=Y(1);
p=1;
for i=1:n-1
    p=conv(p,[1 -X(i)]);
    pol=[0 pol]+p*prazlike(1,i);
end
pol

```

```
vredfunk(1.17)
```

1.1275	0.1197	0.8711	-0.4389	0.4188
1.1503	0.1396	0.8509	-0.4097	0
1.1735	0.1593	0.8316	0	0
1.1972	0.1790	0	0	0

```

y =
0.1564

```

```

pol = 1×4
    0.4188    -1.8844     3.5335    -2.0691

```