

VII laboratorijske vježbe iz Osnova računarstva 2

Zadatak 1.

```
clear all, clc
x1 = -5;
x2 = 5;
x = x1:0.1:x2;
for i = 1 : length(x)
    if x(i)<0
        f(i) = exp(-x(i)) + 5;
    elseif x > 1
        f(i) = -x(i)^2 + 3;
    else
        f(i) = x(i) + 3;
    end
end
plot(x,f)
xlabel('x')
ylabel('f(x)')
```

Zadatak 2.

```
function y = prag(x,n)
y = x;
for i=1:length(x)
    if x(i)>n
        y(i) = n;
    end
end
end
```

Zadatak 3.

```
function A = form_mat(X,M,N);
if (M<1 | fix(M)~=M) | (N<1 | fix(N)~=N)
    error('Pogresan unos!');
end
A = zeros(M,N);
k = 1;
for i = 1 : M
    for j = 1 : N
        if k <= length(X)
            A (i,j) = X(k);
            k = k + 1;
        end
    end
end
end
```

Zadatak 4.

a)

```
function ind = prestupna(x)
    if ((rem(x,4)==0 && rem(x,100)!=0) || rem(x,400)==0)
        ind = 1;
    else
        ind = 0;
    end
end
```

b)

```
clear all, clc
g1=1990;
g2=2020;
br=0;
for i=g1:g2
    if prestupna(i)==1
        br=br+1;
    end
end
br
```

Zadatak 5.

```
function [a,b]=vek_mat(x,y)
    a=zeros(length(x));
    for i=1:length(x)
        a(i,i)=x(i);
    end
    if nargin == 2
        b=a;
        if nargin == 1
            y=x;
        end
        for i=1:length(x)
            j=length(x)+1-i;
            b(i,j)=y(i);
        end
    end
end
```