

```

#include <stdio.h>
int main() {
  int n, i, sum = 0;
  do {
    printf("Enter a positive integer: ");
    scanf("%d", &n);
  }
  while (n <= 0);
  for(i=1; i <= n; ++i) {
    sum += i; // sum = sum+i;
  }
  printf("Sum = %d", sum);
  return 0;
}
  
```



#include<stdio.h>

PROJEKTOVANJE ALGORITAMA

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Konsultacije: četvrtak, kabinet 12, 16:00 – 18:00

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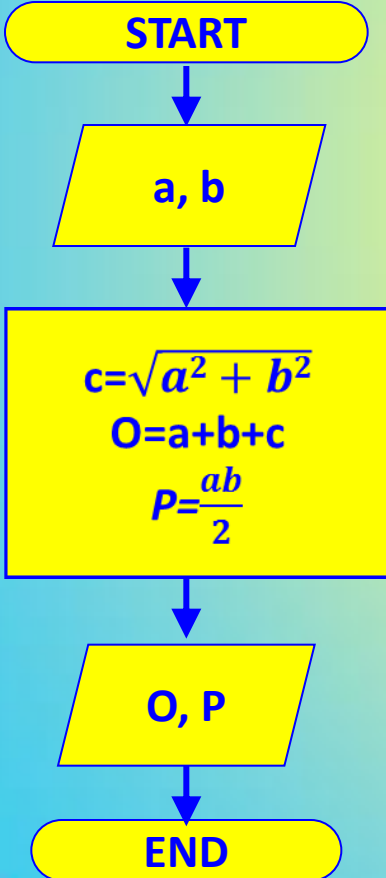


VISOKA
POSLOVNA
ŠKOLA
STRU KOVNIH
STUDIJA
NOVI SAD

Vežba 1

Zadatak 6.

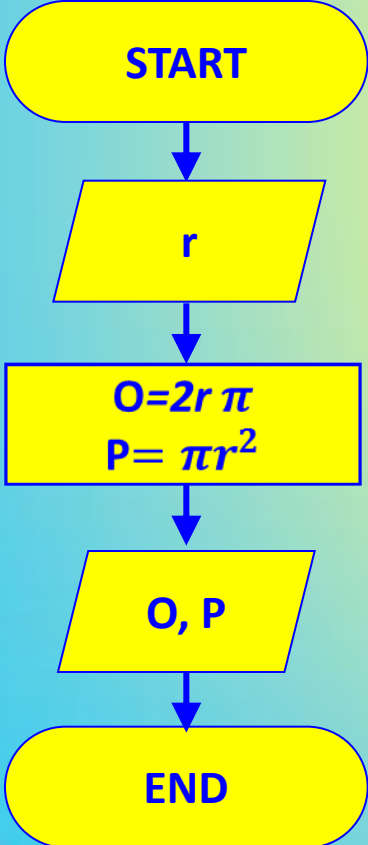
Za poznate katete naći obim i površinu pravouglog trougla.

Dijagram toka	Tekstualni algoritam (pseudo kod)	Programski kod
 <pre>graph TD; START([START]) --> Input[/a, b/]; Input --> Process["c=√(a² + b²) O=a+b+c P=ab/2"]; Process --> Output[/O, P/]; Output --> END([END]);</pre>	<ol style="list-style-type: none">1. Ulaz-uneti katete pravouglog trougla2. Obrada-izračunati dijagonalu, obim i površinu trougla3. Izlaz-ispisati obim i površinu trougla	<pre>#include <stdio.h> main() { double a, b, c, O, P; printf("Unesite katetu A: "); scanf("%lf", &a); printf("Unesite katetu B: "); scanf("%lf", &b); c=sqrt(a*a + b*b); O=a+b+c; P=a*b/2; printf("\nObim trougla je: %.2f", O); printf("\nPovršina kruga je: %.2f", P); }</pre>

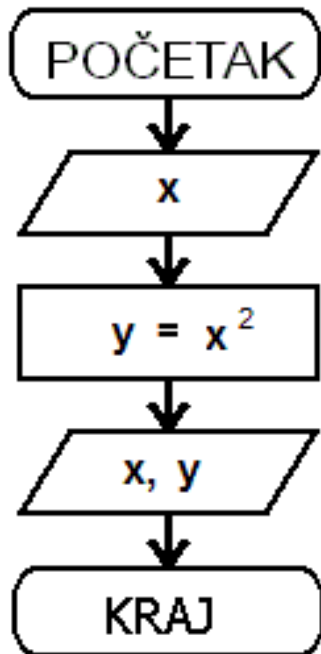
Vežba 1

Zadatak 7.

Napisati algoritam i program koji računa obim i površinu kruga.

Dijagram toka	Tekstualni algoritam (pseudo kod)	Programski kod
 <pre>graph TD; START([START]) --> R[/r/]; R --> PROC[O=2rπ P=πr²]; PROC --> OUT[/O, P/]; OUT --> END([END]);</pre>	<ol style="list-style-type: none">1. Ulaz-učitati poluprečnik kruga2. Obrada-izračunati obim i površinu3. Izlaz-ispisati obim i površinu	<pre>#include <stdio.h> #define PI 3.14159265359 main() { double r, obim, povrsina; printf("Unesite poluprečnik kruga: "); scanf("%lf", &r); obim=2*r*PI; povrsina=r*r*PI; printf("\nObim kruga je: %.2f", obim); printf("\nPovršina kruga je: %.2f", povrsina); }</pre>

Izračunati kvadrat upisanog prirodnog broja i ispisati kao novu varijablu.



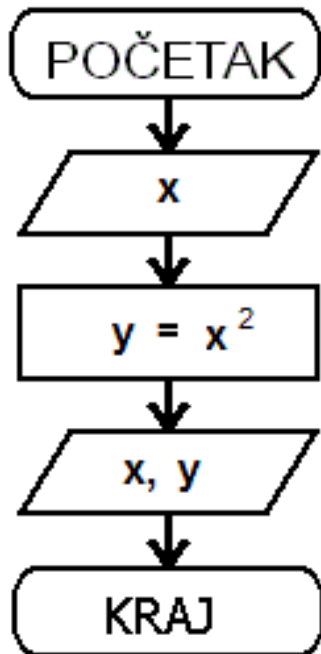
```
#include <stdio.h>
#include <math.h>
```

```
main() {
    int broj;
    double kvadrat;

    printf("Unesi broj: ");
    scanf("%d",&broj);

    kvadrat=broj*broj;
    printf("Kvadrat unesenog broja iznosi: %d",kvadrat);
}
```

Izračunati kvadrat upisanog prirodnog broja i ispisati kao novu varijablu.



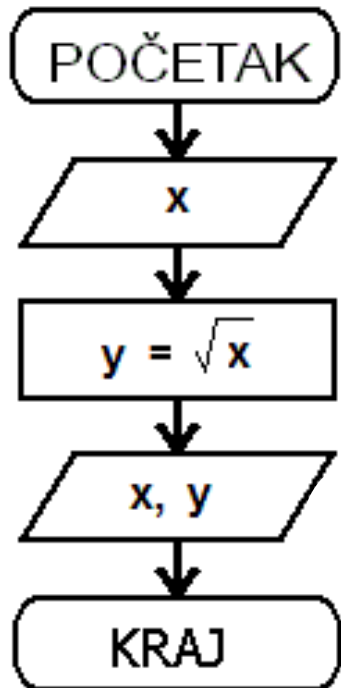
```
#include <stdio.h>
#include <math.h>
```

```
main() {
    int broj;
    double kvadrat;

    printf("Unesi broj: ");
    scanf("%d",&broj);

    kvadrat=pow(broj,2);
    printf("Kvadrat unesenog broja iznosi: %d",kvadrat);
}
```

Izračunati kvadratni koren upisanog broja i ispisati kao novu varijablu



```
#include <stdio.h>
#include <math.h>
```

```
main()
{
```

```
    int broj;
    double koren;
```

```
    printf("Unesi broj: ");
    scanf("%d",&broj);
```

```
    koren=sqrt(broj);
    printf("Koren unesenog broja: %.3f", koren);
```

```
}
```

Izračunati površinu kvadrata stranice a.

```
#include <stdio.h>
```

```
main() {
```

```
    int a;
```

```
    printf("Unesi duzinu stranice kvadrata: ");  
    scanf("%d",&a);
```

```
    printf("Povrsina kvadrata iznosi: %d",a*a);
```

```
}
```

```
#include <stdio.h>
```

```
#include <math.h>
```

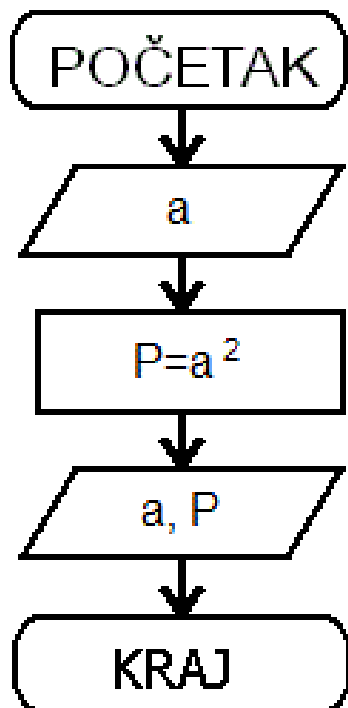
```
main() {
```

```
    int a;
```

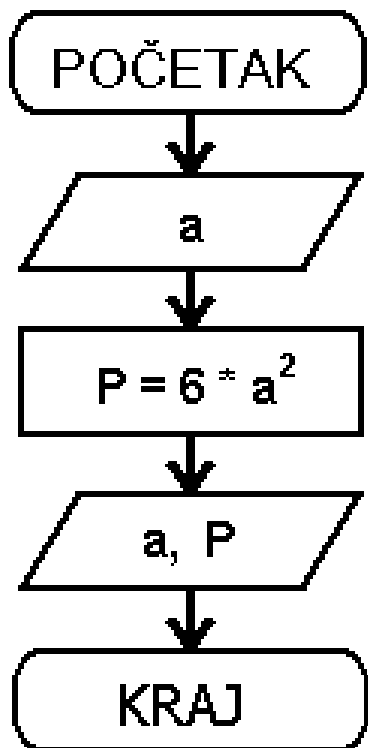
```
    printf("Unesi duzinu stranice kvadrata: ");  
    scanf("%d",&a);
```

```
    printf("Povrsina kvadrata iznosi: %d",pow(a,2));
```

```
}
```



Izračunati površinu kocke stranice a.



```
#include <stdio.h>
main() {
    int a;

    printf("Unesite vrednost stranice kocke: ");
    scanf("%d",&a);

    printf("Povrsina kocke je: %d",6*a*a);
}
```

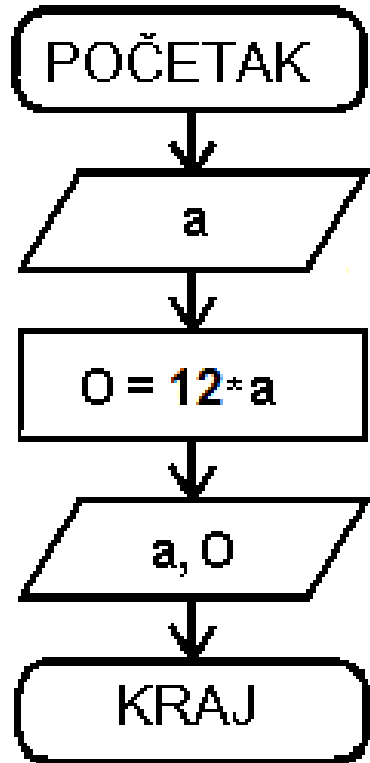
```
#include <stdio.h>
#include <math.h>

main()
{
    int a;

    printf("Unesite vrednost stranice kocke: ");
    scanf("%d",&a);

    printf("Povrsina kocke je: %d",6*pow(a,2));
}
```


Izračunati obim kocke stranice a.



```
#include <stdio.h>
```

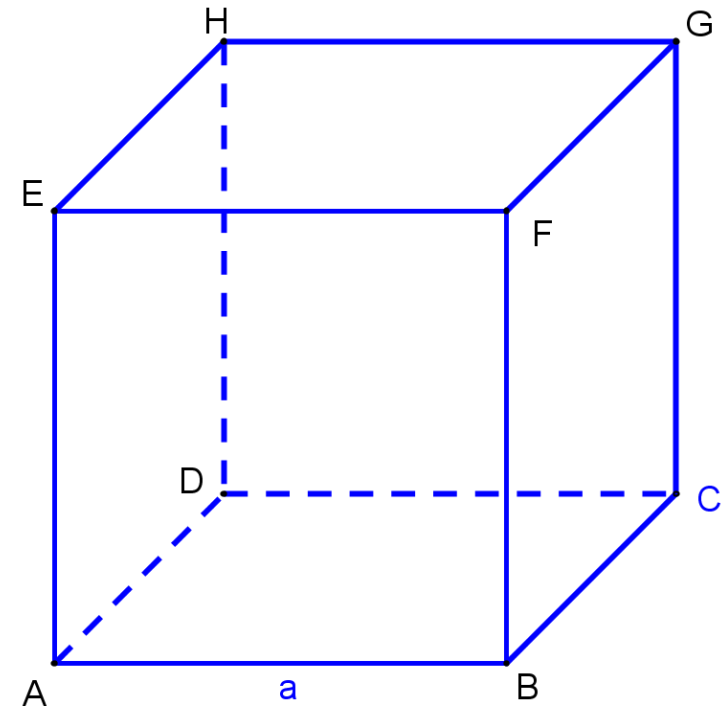
```
main()  
{
```

```
int a;
```

```
printf("Unesite vrednost stranice kocke: ");  
scanf("%d",&a);
```

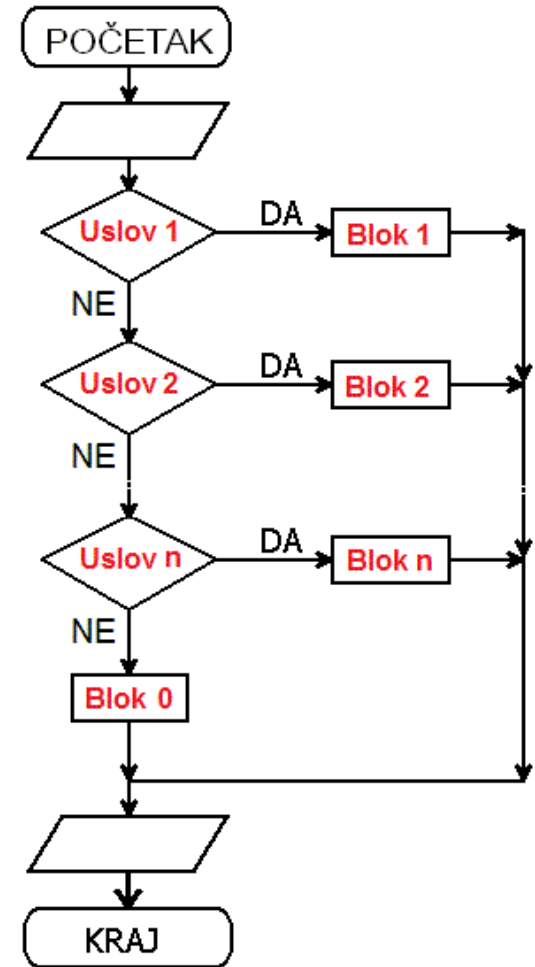
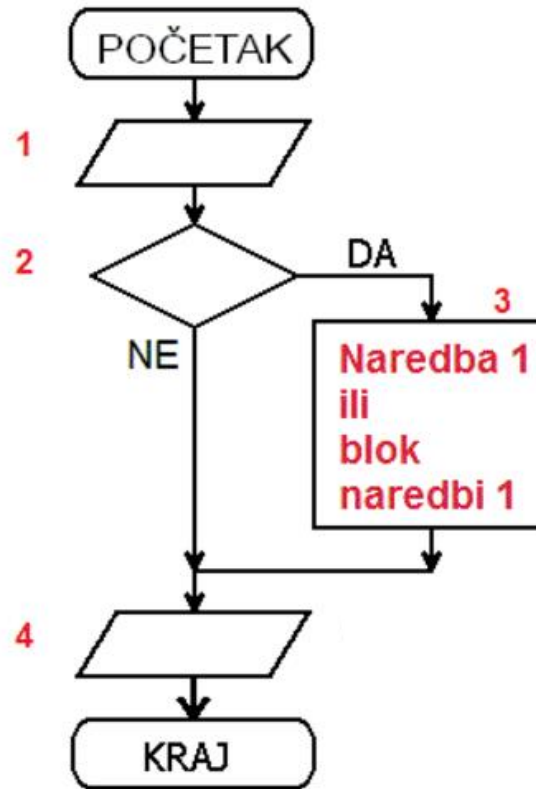
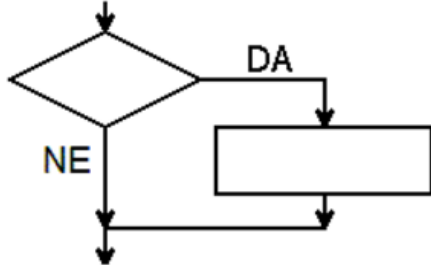
```
printf("Obim kocke je: %d", 12*a);
```

```
}
```



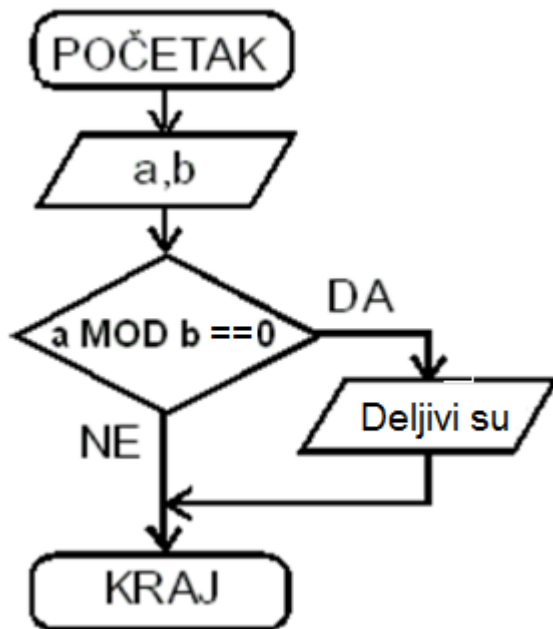
Razgranati linijski algoritmi

IF THEN



Višeblokovsko grananje

Zadatak 1. Proveriti da li je od dva učitana broja prvi deljiv sa drugim



```
#include <stdio.h>
```

```
main()
```

```
{
```

```
    int a, b;
```

```
    printf("Unesite broj A:");
```

```
    scanf("%d",&a);
```

```
    printf("Unesite broj B:");
```

```
    scanf("%d",&b);
```

```
    if (a%b == 0) printf("\n Broj %d jeste deljiv sa  
    brojem %d",a, b);
```

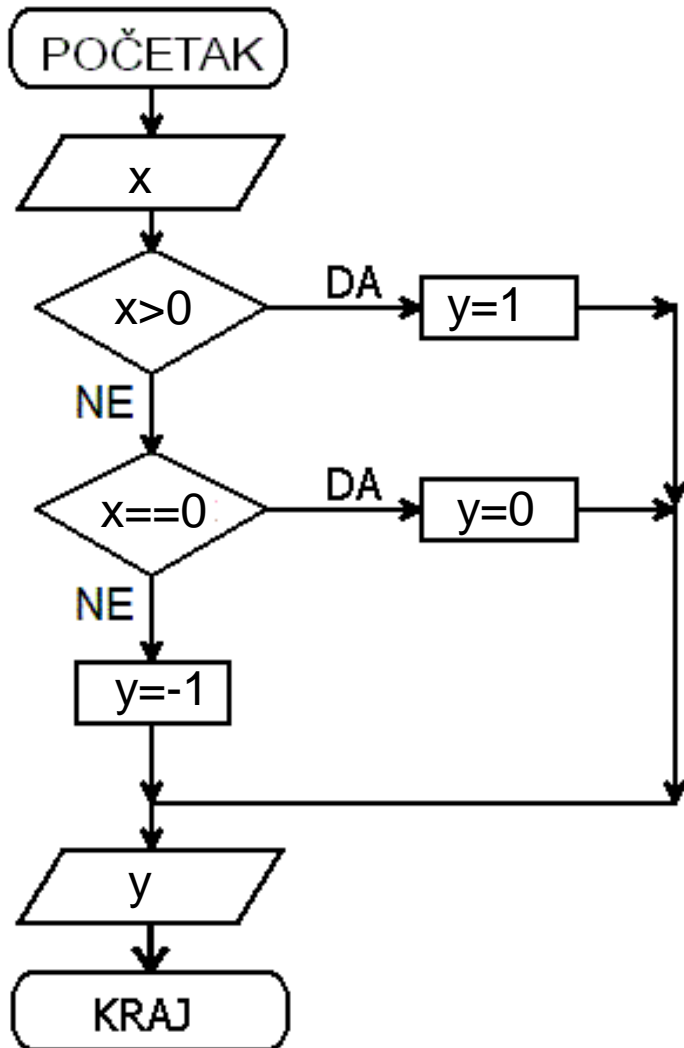
```
}
```

Zadatak 2. Napisati program za određivanje y po formuli:

$$y = \begin{cases} 1, & x > 0 \\ 0, & x = 0 \\ -1, & x < 0 \end{cases}$$

```
#include<stdio.h>
```

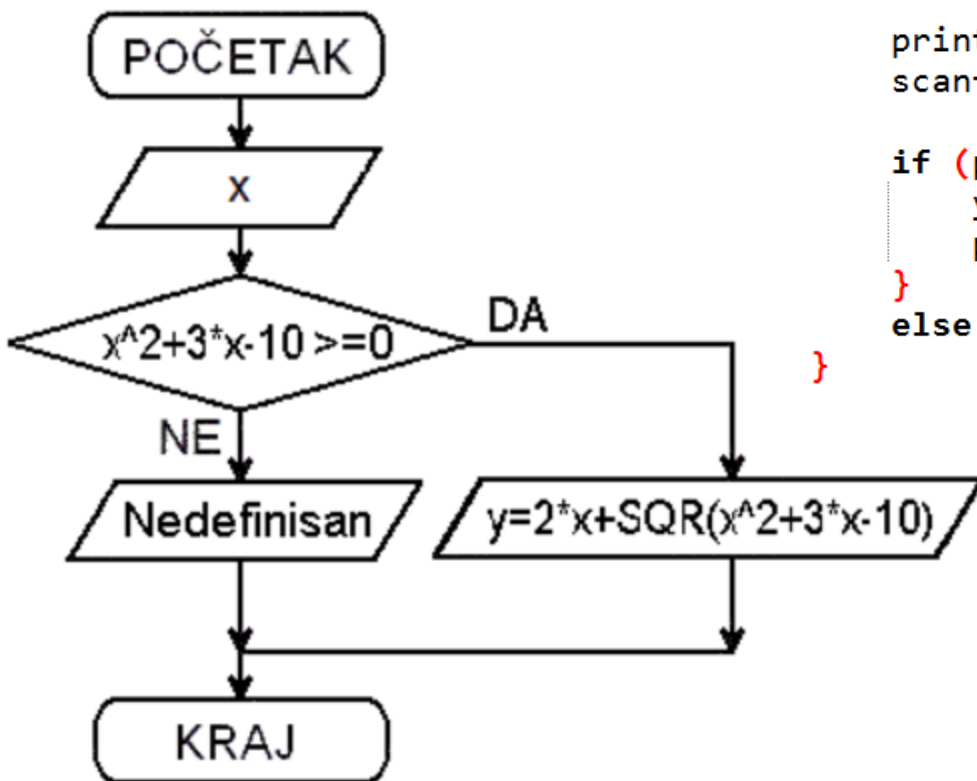
```
main() {  
    int x, y;  
  
    printf("Unesi X: ");  
    scanf("%d",&x);  
  
    if( x > 0) {  
        y=1;  
    }  
    else if(x == 0) {  
        y=0;  
    }  
    else {  
        y= -1;  
    }  
    printf("Resenje je: %d",y);  
}
```



Zadatak 3. Nacrtati algoritam i napisati program za rešavanje sledećeg izraza:

$$y = 2x + \sqrt{x^2 + 3x - 10}$$

$$x_{1/2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



```
#include <stdio.h>
```

```
#include <Math.h>
```

```
main()
```

```
{
```

```
    float x,y;
```

```
    printf("Unesite broj X:");
```

```
    scanf("%f",&x);
```

```
    if (pow(x,2) + 3*x - 10 >= 0) {
```

```
        y=2*x + sqrt(pow(x,2) +3*x -10);
```

```
        printf("\nResenje jednacine je: %.2f",y);
```

```
    }
```

```
    else printf("Vrednost izraza je nedefinisana!");
```

```
}
```

```
float x,y;
```

```
printf("Unesite broj X:");
```

```
scanf("%f",&x);
```

```
if (x<=-5 || x>=2) {
```

```
    y=2*x + sqrt(pow(x,2) +3*x -10);
```

```
    printf("\nResenje jednacine je: %.2f",y);
```

```
}
```

```
else printf("Vrednost izraza je nedefinisana!");
```