

## Lucrarea de laborator nr. 1.

Tema: "Programe liniare in C++"

De calculat valoarea expresiei:

Nr. var	Formula de calcul
1	$A = \frac{2 \cos(x - \pi/6)}{1/2 + \sin^2 y}$ ; $B = 1 + \frac{z^2}{3 + z^2/5}$
2	$A =  x^{y/x} - \sqrt[3]{y/x} $ ; $f = (y-x) \frac{y-z/(y-x)}{1+(y-x)^2}$
3	$S = 1 + x + \frac{x^2}{2} + \frac{x^3}{3} + \frac{x^4}{4}$ ; $e = x(\sin x^3 + \cos^2 y)$
4	$Y = e^{-bt} \sin(at + b) - \sqrt{ bt + a }$ ; $s = b \sin(at^2 \cos 2t) - 1$
5	$W = \sqrt{x^2 + b} - b^2 \sin^3(x+a)/x$ ; $y = \cos^2 x^3 - x/\sqrt{a^2 + b^2}$
6	$S = x^3 \operatorname{tg}^2(x+b)^2 + a/\sqrt{x+b}$ ; $Q = \frac{bx^2 - a}{e^{ax} - 1}$ ;
7	$R = x^2(x+1)/b - \sin^2(x+a)$ ; $s = \sqrt{xb/a} + \cos^2(x+b)^3$
8	$Y = \sin^3(x^2 + a)^2 - \sqrt{x/b}$ ; $z = \frac{x^2}{a} + \cos(x+b)^3$
9	$F = \sqrt[3]{m * \operatorname{tg}(t) +  c * \sin(t) }$ ; $z = m \cos(bt * \sin(t)) + c$
10	$Y = b \operatorname{tg}^2 x - \frac{a}{\sin^2(x/a)}$ ; $d = a e^{-\sqrt{a}} \cos(bx/a)$
11	$F = \ln(a+x^2) \sin^2(x/b)$ ; $z = e^{-cx} \frac{x + \sqrt{x+a}}{x - \sqrt{ x-b }}$
12	$Y = \frac{a^{2x} + b^{-x} \cos(a+b)x}{x+1}$ ; $r = \sqrt{x^2 + b} - b^2 \sin^3(x+a)/x$
13	$Z = \sqrt{ax \sin 2x + e^{-2x}(x+b)}$ ; $w = \cos^2 x^3 - x/\sqrt{a^2 + b^2}$
14	$U = \frac{a^2 x + e^{-x} \cos bx}{bx - e^{-x} \sin bx + 1}$ ; $f = e^{2x} \ln(a+x) - b^{3x} \ln(b-x)$
15	$Z = \frac{\sin x}{\sqrt{1+m^2 \sin^2 x}} - cm \ln mx$ ; $s = e^{-ax} \sqrt{x+1} + e^{-bx} \sqrt{x+1.5}$
16	$C = \ln(x + 7 \sqrt{\frac{ x+a }{ x+b }})$ ; $D = \frac{1.5 \cos^2 x}{3 \operatorname{tg} x}$

Exemplu de program:

De calculat valoarea expresiei:  $C = \ln(x + 7 \sqrt{\frac{|x+a|}{|x+b|}})$  ;  $D = \frac{1.5 \cos^2 x}{3 \operatorname{tg} x}$  ;

```
#include<stdio.h>
#include<conio.h>
#include<math.h>
void main (void) {
int x,a,b; float c,d;
clrscr();
printf("Culegeti valorile x,a,b:\n");
scanf("%d%d%d",&x,&a,&b);
c=log(x+7*sqrt(abs(x+a)/abs(x+b)));
d=1.5*pow(cos(x),2)/3*tan(x);
printf("Rezultatul: c=%f d=%f",c,d);
getch();}
```