MBA

Лабораторная работа №1. Линейные алгоритмы

Написать программу для вычисления арифметического выражения.

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№	Арифметическое выражение	Контрольный пример
1	$\sqrt[3]{\ln(\mathrm{a}b+c^2)}-\dfrac{a+c^3-1}{\sqrt{2(\mathrm{a}-1)}}+\dfrac{\sin a+\sqrt[a]{b+(c-1)^2}}{\sqrt{a}\cdot tg\dfrac{a}{b}}$	a = 2 b = 1 c = 1
2	$\dfrac{\sqrt[4]{10-\lvert a+c\rvert^3}}{a-b^2-1}+\left(\dfrac{2a+1}{b}\right)^c e^{a-b}+\sqrt[3]{\sin a+\ln b}$	a = 0 b = 1 c = -1
3	$2^{a\text{-}b}\sqrt{c^2+\sqrt[3]{\lvert b-1\rvert}}+b^2\left(arctg(a)-\dfrac{\pi}{6}\right)(a+2)^{1/(c+b)}$	a = 7 b = 1 c = 2
4	$\dfrac{b^{a+1}}{\sqrt[3]{\lvert b\text{-}2\rvert}-5}+\dfrac{ab^2-c}{(a-c)^3}-\sin c+\sqrt[5]{b^2-e^c}$	a = 1 b = 3 c = 0
5	$\dfrac{\sqrt[3]{7+\lvert a-b\rvert^2+1}}{a^2+b^2+2}-e^{\lvert a-b\rvert}(tg^2c+1)^a$	a = 1 b = 1 c = π/4
6	$\sqrt{a^{1,7}-1}+\dfrac{\lg\left(a+b^{\frac{1,3}{a}}\right)}{a-3}+\dfrac{1}{c^{1,7}\cdot\sqrt{2\pi}}\cdot e^{\frac{-(b-a)^2}{2c^2}}$	a = 1 b = 0 c = 1
7	$\dfrac{1}{2b}\cdot e^{\frac{-\left\lvert c^{4,5}-a\right\rvert}{b}}+\cos^{1,57}c\left(\ln\left\lvert 2-e^{-\lvert a+c\rvert}\right\rvert\right)$	a = 1 b = 2 c = 0
8	$\dfrac{e^{\sin^2c}+\ln\lvert tgc\rvert}{\sin c}+\dfrac{\sin^{3,2}\left\lvert ac^3+bc^2-ab\right\rvert}{\sqrt{\left\lvert ac^3+bc^2-ab\right\rvert}}$	a = 2 b = 2 c = 2
9	$a\cdot\sqrt{\cos a+a}+\dfrac{c^{1,3}}{\cos a^{3,2}-\dfrac{a}{3}}+\dfrac{1+\sin\sqrt{b^{1,7}+1}}{\cos(12c-4)}$	a = 1 b = 0 c = π/3

10	$a \cdot e^{-ac^{1,7}} \cdot \sin^{1,6} b \cdot +c - \frac{c^{3,5}}{3} + \frac{a^{5,2} tg(b)}{5}$	a = 1 b = π c = 1
11	$\sqrt[4]{ab^2 + 18} + \frac{a + \sqrt{2(a+b)+5}}{4 \sin \frac{c}{2}} + \cos^{a-b} c$	a = 7 b = 3 c = π
12	$\frac{a^2 + c}{2a} + \frac{0.5 \cos^2 b + \sqrt{a+1} \cos \frac{b}{6}}{1 + log_a c} + \sqrt[3]{3(c+1)}$	a = 2 b = π c = 8
13	$7 \sin \frac{c}{a+b} + \sqrt{\frac{\left\|\sqrt[3]{2b} - 9a\right\|}{0.5a} + \frac{3\sin \frac{c}{2} + \cos^2 c}{log_a 4b}}$	a = 2 b = 4 c = π
14	$\frac{log_b 32 + \sqrt[3]{3b + 2c}}{\sqrt{c+2} \cdot tg \frac{a}{2(b+c)}} + \left\|c - 3b\right\| + \frac{2 \cos^2 a}{lg\, 5b}$	a = π b = 2 c = 1
15	$\sqrt[3]{5a^2 + 7} + \frac{3 log_a 8}{\sin \frac{b}{2a}} + \frac{4\left\|c - 2a + 1\right\|}{\sqrt{8a}}$	a = 2 b = π c = 0
16	$2ctg(3a^{1,8}) - \sqrt[5]{\sin b} + \sqrt{\sin b^{2.7} + a^{2.7}} - ctg\sqrt{c^{2,7} + 1}$	a = 1 b = 0 c = 1
17	$\frac{(b-c)^2 + 1}{a} + \frac{\sqrt{b+c+1}}{log_2 \left\|a-1\right\|} + \frac{c + \cos \frac{a-5}{2}}{1 + \sqrt[3]{4a+b+1}}$	a = 5 b = 6 c = 9
18	$tg^2 c + log_{2a} 8 + \frac{1 + \left\|a-b\right\| + \sqrt{10a + 3b}}{3\sin \frac{c}{2a} + \sqrt[3]{2(b-1)} + ln\, a}$	a = 1 b = 5 c = 5
19	$\frac{8 \sin \frac{b}{ac} + \cos b}{1 + log_c (a+1)} + lg(3a+1) + \frac{a + c^2 + 1}{\sqrt{4(a+1)}}$	a = 3 b = π c = 2
20	$\left(\frac{a+1}{b-1}\right)^2 + \cos\left(ac^{2,7b^{1,7}}\right) + \left(1 + \frac{1}{a^2}\right)^{2,7}$	a = 1 b = 0 c = 2
21	$2 \cos^2 a + 8 lg(b+c) + \frac{\sqrt[c]{b + log_2 (c-1)}}{1 + \sqrt{c}\, tg \frac{a}{b-1}}$	a = π b = 7 c = 3
22	$\sqrt{\frac{(a+b-1)^2}{b + \cos^2 c - 1} + a} + 5 \sin \frac{2c}{b} + \frac{\log_b 16}{\left\|a - 11\right\|}$	a = 9 b = 4 c = π

23	$\dfrac{log_c(b+1)}{3+\sqrt[3]{4b-1}}+tg^2(c-2)+\dfrac{\sqrt{\dfrac{2b^2}{a+c}+c}}{2\left\lvert ln\dfrac{c}{2}-a+1\right\rvert}$	a = 5 b = 7 c = 2
24	$3.5\cos a+\dfrac{\sqrt{5c^2+1}}{b^2+tg^2a}+\dfrac{2+ln\lvert a-b\rvert}{c}$	a = 0 b = -1 c = 4
25	$\dfrac{ln\lvert a-b\rvert}{a}+\dfrac{ab+4log_b 8}{2+\sqrt[4]{2a+5b}}+\sqrt{\dfrac{a+b}{\cos c^2}-1}$	a = 3 b = 2 c = 0
26	$\dfrac{b^2-3a}{1+ln\lvert c-1\rvert}+\dfrac{7\sqrt{\cos(2c-b)+\lvert b\rvert}}{2\lvert a+c\rvert}+\sqrt{6b+1}$	a = -3 b = 4 c = 2
27	$\dfrac{\sqrt{\cos 2a}}{b^3}-2\lg(c-b)+\left(\dfrac{a^2\sin(a-b)}{\lg\dfrac{c}{b}}\right)^{-1}\cdot e^{\sqrt{ab}}$	a = 4 b = 1 c = 2
28	$\dfrac{a}{\sin b}+\dfrac{\sqrt{b-3a}}{\lg(2\cos b-1)}+\dfrac{\mathrm{tg}b}{2\log_2\dfrac{c}{b}}\cdot\dfrac{b-a}{\sqrt{\cos a}}$	a = 0 b = 1 c = 2