Задание

Создать программу вычисления указанной величины.

Результат проверить при заданных исходных значениях.

Выражение для вычисления	Контрольный пример
1. $t = \dfrac{2\cos(x-\pi/6)}{0{,}5+\sin^2 y}\left(1+\dfrac{z^2}{3-z^2/5}\right)$.	При x = 14.26, y = –1.22, z = 3.5×10^{-2} : **0.564846.**
2. $u = \dfrac{\sqrt[3]{8+\lvert x-y\rvert^2+1}}{x^2+y^2+2} - e^{\lvert x-y\rvert}(tg^2 z+1)^x$.	При x = –4.5, y = 0.75×10^{-4}, z = 0.845×10^{2} : **– 55.6848.**
3. $v = \dfrac{1+\sin^2(x+y)}{\left\lvert x-\dfrac{2y}{1+x^2y^2}\right\rvert} x^{\lvert y\rvert} + \cos^2[arctg(1/z)]$.	При x = 3.74×10^{-2}, y = –0.825, z = 0.16×10^{2} : **1.0553.**
4. $w = \lvert\cos x-\cos y\rvert^{(1+2\sin^2 y)}\left(1+z+\dfrac{z^2}{2}+\dfrac{z^3}{3}+\dfrac{z^4}{4}\right)$.	При x = 0.4×10^{4}, y = –0.875, z = -0.475×10^{-3} : **1.9873**.
5. $\alpha = \ln(y^{-\sqrt{\lvert x\rvert}})(x-y/2)+\sin^2 arctg(z)$.	При x = –15.246, y = 4.642×10^{-2}, z = 20.001×10^{2} : **– 182.036**.
6. $\beta = \sqrt{10(\sqrt[3]{x}+x^{y+2})}\cdot(\arcsin^2 z-\lvert x-y\rvert)$	При x = 16.55×10^{-3}, y = –2.75, z = 0.15 : **40.630694**.
7. $\gamma = 5arctg(x)-\dfrac{1}{4}\arccos(x)\dfrac{x+3\lvert x-y\rvert+x^2}{\lvert x-y\rvert z+x^2}$.	При x = 0.1722, y = 6.33, z = 3.25×10^{-4} : **– 205.305571**.
8. $\varphi = \dfrac{e^{\lvert x-y\rvert}\lvert x-y\rvert^{x+y}}{arctg\ x+arctg\ z} + \sqrt[3]{x^6+\ln^2 y}$.	При x = -2.235×10^{-2}, y = 2.23, z = 15.221 : **39.374**.
9. $\psi = \lvert x^{y/x}-\sqrt[3]{y/x}\rvert+(y-x)\dfrac{\cos y-z/(y-x)}{1+(y-x)^2}$.	При x = 1.825×10^{2}, y = 18.225, z = -3.298×10^{-2} : **1.2131**.
10. $a = 2^{-x}\sqrt{x+\sqrt[4]{\lvert y\rvert}}\ \sqrt[3]{e^{x-1/\sin z}}$.	При x = 3.981×10^{-2}, y = $-1.625\times\times10^{3}$,

	$z = 0.512$: **1.26185**.
11. $b = y^{\sqrt[3]{\lvert x\rvert}} + \cos^3 y \dfrac{\lvert x-y\rvert \cdot \left(1+\dfrac{\sin^2 z}{\sqrt{x+y}}\right)}{e^{\lvert x-y\rvert} + x/2}$.	При $x = 6.251$, $y = 0.827$, $z = 25.001$: **0.7121**.
12. $c = 2^{y^x} + (3^x)^y - \dfrac{y\cdot(arctgz - \pi/6)}{\lvert x\rvert + \dfrac{1}{y^2+1}}$.	При $x = 3.251$, $y = 0.325$, $z = 0.466\times10^{-4}$: **4.251433**.
13. $f = \dfrac{\sqrt[4]{y+\sqrt[3]{x-1}}}{\lvert x-y\rvert(\sin^2 z + tg\ z)}$.	При $x = 17.421$, $y = 10.365\times10^{-3}$, $z = 0.828\times10^{5}$: **0.33056**.
14. $g = \dfrac{y^{x+1}}{\sqrt[3]{\lvert y-2\rvert}+3} + \dfrac{x+y/2}{2\lvert x+y\rvert}(x+1)^{-1/\sin z}$.	При $x = 12.3\times10^{-1}$, $y = 15.4$, $z = 0.252\times10^{3}$: **82.825623**.
15. $h = \dfrac{x^{y+1}+e^{y-1}}{1+x\lvert y-tgz\rvert}(1+\lvert y-x\rvert) + \dfrac{\lvert y-x\rvert^2}{2} - \dfrac{\lvert y-x\rvert^3}{3}$.	При $x = 2.444$, $y = 0.869\times10^{-2}$, $z = -0.13\times10^{3}$: **–0.49871**.
16. $w = \sqrt[3]{x^6 + \ln^2 y} + \dfrac{e^{\lvert x-y\rvert}\lvert x-y\rvert^{x+y}}{arctg(x)+arctg(z)}$.	При $x = -2.235\times10^{-2}$, $y = 2.23$, $z = 15.221$: **39.374**.