1. Berilgan funksiyaning differensiali dy va ikkinchi tartibli differensiali d^2y -ni toping.

1. $y = x\arcsin\frac{1}{x} + \ln\left|x + \sqrt{x^2 - 1}\right|,\ x > 0.$
2. $y = \ln\left(\cos^2 x + \sqrt{1 + \cos^4 x}\right).$
3. $y = \arccos\frac{1}{\sqrt{1 + 2x^2}},\ x > 0.$
4. $y = \sqrt{1 + 2x} - \ln\left(x + \sqrt{1 + 2x}\right).$
5. $y = \ln\left(x + \sqrt{1 + x^2}\right) - \sqrt{1 + x^2}\,\mathrm{arctg}x.$
6. $y = \frac{\ln|x|}{1 + x^2} - \frac{1}{2}\ln\frac{x^2}{1 + x^2}.$
7. $y = \ln\left(e^x + \sqrt{e^{2x} - 1}\right) + \arcsin e^{-x}.$
8. $y = x\sqrt{4 - x^2} + 4\arcsin\frac{x}{2}.$
9. $y = \ln\mathrm{tg}\frac{x}{2} - \frac{x}{\sin x}.$
10. $y = 2x + \ln\left|\sin x + 2\cos x\right|.$
11. $y = \sqrt{\mathrm{ctg}x} - \sqrt{\mathrm{tg}^3\frac{x}{3}}.$
12. $y = 2x + \ln\left|\sin x + 2\cos x\right|.$
13. $y = \mathrm{arcth}\frac{x^2 - 1}{x}.$
14. $y = \ln\left|x^2 - 1\right| - \frac{1}{x^2 - 1}.$
15. $y = \mathrm{arctg}\left(\mathrm{tg}\frac{x}{2} + 1\right).$
16. $y = \ln\left|2x + 2\sqrt{x^2 + x} + 1\right|.$
17. $y = e^x\left(\cos 2x + 2\sin 2x\right).$
18. $y = x\left(\sin\ln x - \cos\ln x\right).$
19. $y = \sqrt{3 + x^2} - x\ln\left|x + \sqrt{3 + x^2}\right|.$
20. $y = \arccos\frac{1}{\sqrt{1 + 2x^2}},\ x > 0.$
21. $y = \arccos\frac{x^2 - 1}{x^2\sqrt{2}}.$
22. $y = \mathrm{tg}\left(2\arccos\sqrt{1 - x^2}\right),\ x > 0.$
23. $y = \sqrt{x} - (1 + x)\mathrm{arctg}\sqrt{x}$
24. $y = \cos x\ln\mathrm{tg}x - \ln\mathrm{tg}\frac{x}{2}.$
25. $y = x^2\mathrm{arctg}\sqrt{x^2 - 1} - \sqrt{x^2 - 1}$