Tutoriál „Naučme se derivovat!"

Vypočtěte derivace funkcí.

1. $y = \operatorname{arccot} \dfrac{1}{x^2}$

2. $y = (\sqrt{x} + \sqrt[3]{x})(3^x + x^4)$

3. $y = \ln \sqrt{2x} + \sqrt{\ln 2x} + \sqrt{2} \ln x$

4. $y = \dfrac{\sqrt{x^2 - 3x}}{x + 4}$

5. $y = \ln 10 + \sqrt{5} - \dfrac{1}{e^2}$

6. $y = 2 \cos^2 \left(4x + \dfrac{\pi}{2} \right)$

7. $y = \ln \dfrac{x^3}{x^2 - 1}$

8. $y = \dfrac{1 - \log x}{1 + \log x}$

9. $y = 6x^2 \cot x$

10. $y = \arctan \dfrac{x}{\sqrt{9 - x^2}}$

11. $y = x^2 e^{1/x} - x e^{-x^2}$

12. $y = \sqrt{2x} + \sqrt{2} \cdot x + 2\sqrt{x}$

13. $y = \left(\dfrac{x^2}{2^x + x} \right)^3$

14. $y = \ln \sqrt{\tan x}$

15. $y = \dfrac{7}{x^2} + \dfrac{2^x}{7} + \sqrt{7} + \log 7$

16. $y = \log_2 x \cdot \sin 2x$

17. $y = \dfrac{\tan x}{x - x^2}$

18. $y = \sqrt[3]{\dfrac{\ln x}{e^x}}$

19. $y = \arccos(3x + x^3)$

20. $y = \dfrac{\sin x}{\cos^2 x}$