

Find y' if

1. $y = 3x^2 - \sqrt{x} + \frac{1}{x}$

2. $y = \cos x + e^x + \ln x$

3. $y = (x^2 - 2x + 5) \sin x$

4. $y = \frac{x^3 - x^2 + 2x - 1}{x}$

5. $y = (\tan x)(\ln x)$

6. $y = \frac{x^2 - 2x + 1}{3x + 4}$

7. $y = \frac{e^x + 1}{2x + 5}$

8. $y = \frac{x \sin x}{x^2 - 1}$

9. $y = (1 + r^2)^{1/2}$

10. $y = \ln(\csc x + \cot x)$

11. $y = e^{-5x} - \sec 4x$

12. $y = \sinh(x^2 + 1)$

13. $y = x^{(x^2+1)}$

14. $y = (1 + \cos x)^{2x}$

15. $\ln(x^2 + y^2) = x$

16. $\cosh(xy) = x^2 + y$

17. $y = \int_1^x \sin(t^2 + 1) dt$

18. $y = \int_x^{-3} e^{\tan t} dt$

19. $y = \int_{-10}^{\tan x} \frac{dt}{1 + t^4}$

$$20. y = \int_{x^2}^4 \ln(1 + t^2) dt$$

$$21. y = \sin(\sin(x))$$

$$22. y = x^2 e^{2x} \tan x$$

$$23. y = x e^x$$

$$24. y = x \ln x - x$$

$$25. y = e^{-r^2}$$

$$26. y = \sin^2 x + \cos^2 x$$