

Sample Derivative Mastery Test

Find y' for each function y below:

1. $y = \sin x$

2. $y = \cos x$

3. $y = \tan x$

4. $y = \sec x$

5. $y = \cot x$

6. $y = \csc x$

7. $y = \arcsin x$

8. $y = \arctan x$

9. $y = \log_7 x$

10. $y = \ln x$

11. $y = e^x$

12. $y = e^\pi$

13. $y = 7^x$

14. $y = x^{23}$

15. $y = 1/x$

16. $y = x^5 + 5^x$

17. $y = \sqrt{x}$

18. $y = x^{-3/4}$

19. $x^{\pi+1}$

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

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

22. $y = \tan(x)/\ln(x)$

23. $y = \sqrt{\tan(x)}$

$$24. y = e^{\sin(x)}$$

$$25. y = \ln(\sin(x))$$

$$26. y = \sin(\ln(x))$$

$$27. y = x^{\sin(x)}$$

$$28. y = (\tan x)^5$$

$$29. y = \tan x^5$$

$$30. y = \arctan(\tan(3))$$

$$31. y = \arctan(\cos(x))$$

$$32. y = e^{(\sin(x))^3}$$

$$33. y = x e^x \sin(x)$$

$$34. y = x e^x / \sin(x)$$

$$35. y^4 + xy = x^2 \quad \text{Solve for } y'$$

$$36. y = x^2/f(x) \quad \text{Find } y' \text{ in terms of } f \text{ and } f'.$$