

## Differentiation Quiz ... Set 4

Find the derivative:

$$11. h(x) = \frac{\sin x}{2x-3}$$

$$12. y = x^3 + \frac{1}{2x^3} - \frac{2}{\sqrt[3]{x}}$$

$$13. y = \sin(5x) \cos(3x)$$

$$14. y = (\cos(x^2) + \cos^2 x)^4$$

$$15. y = 12 + x \cos x + x^5$$

$$16. y = (x^2 + x - 1) \sin x \cos^2 x$$

$$17. y = \cos\left(x^2 + \frac{x}{x+1}\right)$$

$$18. y = \frac{x^2-2}{x^4+1}$$

$$19. y = x^2 \sqrt[3]{\tan x}$$

$$20. y = \left(\sqrt{x^2 + 1} + x\right)^5$$

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Find the derivative:

$$21. y = \sqrt{1 - \cos x} (\tan x)^3$$

$$22. y = \frac{\sin(x^3)}{\sin(x^2)}$$

$$23. y = x^3 + \sin(x) \cos^2(x)$$

$$24. y = x(10x + 6)^{2011}$$

$$25. y = \sqrt{(\sin x)^3 + 1}$$

$$26. y = \tan(x^4 + 3x^2 + 1)$$

$$27. y = \frac{\sin(3x)}{1+x^4}$$

$$28. y = (5 - 2 \cos x)^{\frac{3}{2}}$$

$$29. y = (5\sqrt{x} + 3)^{80}$$

$$30. y = \frac{1}{x} \sin^{-4}(x) - \frac{x}{3} \cos^3(x)$$

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Find the derivative:

$$31. y = \frac{\tan(2x)}{(x+5)^4}$$

$$32. y = \tan\left(\frac{\cos(x)}{x}\right)$$

$$33. y = \sin\left(\frac{x}{\sqrt{x^2+1}}\right)$$

$$34. y = \sin^5(3x^4 - 7x)$$