

Finding More Derivatives

Directions: Find $\frac{dy}{dx}$. Simplify completely.

1. $y = x^2 + \cos(5x)$

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

3. $y = \sin^3 x$

4. $y = 7x - 3 \cos(x^3)$

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

6. $y = x^5 e^x$

7. $y = \sqrt{x^3 - 1}$

8. $y = e^{\sqrt{x}}$

9. $y = x^2 \tan(x^2)$

10. $y = \sqrt{x^3 + x - 11}$

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

12. $y = \frac{3+\sec x}{\tan x}$

13. $y = \sqrt{x^2 - e^x}(\sin x)$

14. $y = \cot^3(x)$

15. $y = 3^x \csc(x^3)$

16. $y = \sqrt[3]{x - \sin^2 x}$

17. $y = e^{\sin^5 x}$

18. $y = \cos(e^{4x})$

19. $y = \frac{e^x}{2^x}$

20. $y = (\sin x)(\cos x)e^x$

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

22. $y = e^{(e^x)}$

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

$$24. (\sin x)(\cos y) = x + y - 7$$

$$25. \sqrt{x+y} = x^2 y^2$$

$$26. e^{xy} - x = y^3$$

$$27. x - xy = y^2 + y^3$$

$$28. x \sin y - y \cos x = 10$$

$$29. e^x e^y - xy = 2 - \cos x$$

$$30. xy^2 - x^3 y^4 + x^5 y^6 = 7$$