

Derivative Practice III

Find the derivative of each of the following functions.

1. $y = x^2 2^x + \mathbf{p}^2$

2. $y = \arcsin(x^2)$

3. $y = \sqrt{10^{5-x}}$

4. $y = [\arccos(x)]^3$

5. $y = \arctan(e^x)$

6. $f(x) = \frac{4}{x} \cdot 3^{x^2-x}$

7. $g(x) = 5^x + 3x^7$

8. $f(x) = \arctan(-5x)$

9. $2y = x^2 + \sin y$

10. $y = \arccos(x^3)$

11. $y = [\arcsin(x)]^4$

12. $f(x) = \arctan(-2x)$

13. $3y = x^3 + \cos y$

$$14. y = e^{10x} \csc^{-1}(20x)$$

$$15. y = \sec^{-1}(7x)$$

$$16. x \cos y + y \cos x = 1$$

$$17. \frac{y}{x-y} = x^2 + 1$$

$$18. x^2 y^3 + 3y^2 = x - 4y$$

$$19. y\sqrt{x-1} + x\sqrt{y-1} = xy$$

$$20. 2xy = (x^2 + y^2)^{\frac{3}{2}}$$