

Basic Derivatives Practice

Directions: Find the derivative of each function using the power, product, quotient, and chain rules.

1. $y = \sin(8x)$

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

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

4. $y = 3 \sec\left(\frac{1}{2}x\right)$

5. $y = (\cot x)(\sin 2x)$

6. $y = 2x^3 \csc x$

7. $y = \sqrt{\sin x}$

8. $y = (3x^2 - 5x + 1)^7$

9. $y = \frac{\tan 2x}{2x}$

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

11. $y = 3x^2 \sin 4x$

12. $y = (\sqrt{x^2 - 1})(\sin x)$

13. $y = (\sin 5x)(\cos 6x)$

14. $y = \frac{\sin 2x}{\cos 3x}$

15. $y = (x^2 \tan 2x)^3$