

Directions: Find the derivative of the following functions.

1. $f(x) = [\sec(-x)][\sin(3x^2 - 7x)]$

2. $f(x) = \cot \left[\frac{(\ln x)}{e^{-x}} \right]$

3. $f(x) = \frac{\cos(\sqrt{5x^2-3})}{\tan x}$

4. $f(x) = \csc^2(8x) - \cot^2(8x)$

5. $f(x) = \sec(5x \sin(5x))$

6. $f(x) = \sin(\cos(3\pi x))$

$$7. f(x) = \sqrt[3]{\csc \sqrt{2 \sin x \cos x}}$$

$$8. f(x) = \ln 5^{x(\sec 3x)(\cos - 2x)}$$

$$9. f(x) = \log[(\cos^2 x + 2 \tan(x^3 - 7x))]$$

$$10. f(x) = [\csc(e^{-x})][\ln(\sin 3x)]$$

$$11. f(x) = \sec^4(\sin(\tan \sqrt{x}))$$

$$12. f(x) = \frac{2}{\sqrt[5]{\ln[3e^x(\cot x)]}}$$

$$13. f(x) = (x^{\cos(-\pi)})(-\pi \cos x)$$

$$14. f(x) = \frac{\frac{\cos(5x)}{\cos(-3x)}}{\csc(-3x) \cot(5x)}$$