

Directions: Find the derivative of the following functions.

1. $f(x) = \cos(-x) + x \sin(3x^2 - 7x)$

2. $f(x) = \sec\left(\frac{1}{\sqrt{x}}\right) - 9 \tan(e^{-x})$

3. $f(x) = [\csc(3 - 4x)][\cot(-x)]$

4. $f(x) = \frac{\tan(e^x)}{\csc(7x - 5x^3)}$

5. $f(x) = \sec(3x\sqrt{\cos x})$

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

7. $f(x) = \cot^4(5x^4 - 3x^2 - 1)$

8. $f(x) = \tan \sqrt[3]{\cos x^2}$

9. $f(x) = \cos(e^{3x} + 2x^5)^3$

10. $f(x) = [\sec(\ln x)][\sin 3x]$

11. $f(x) = \ln\left(\frac{\cos x}{\cot 4x}\right)$

12. $f(x) = \tan(\sec^2(2x))$

13. $f(x) = e^{(\sec x)(\cot 5x^2)}$

14. $f(x) = \ln \sqrt[3]{(\tan(-2x))(\cos 5x)}$