

Math 150 More Take-home Derivative Practice Problems Fall 2024

Find the derivative of each function below. For more fun, find the second derivatives! Then you can check your answers on this website:

<https://www.wolframalpha.com/calculators/derivative-calculator>

$$\cos^3(e^{5x^2})$$

$$\ln(\cosh x^3)$$

$$x^3 \tan(e^x)$$

$$\tanh(\sin x^2)$$

$$\arcsin(e^{3x})$$

$$\sinh^3(x^2)$$

$$\frac{x^2+1}{\cosh(\sin x)}$$

$$e^{3x \cos^{-1} 2x}$$

$$\cot^3(\sinh x)$$

$$\sin(x^x)$$

$$(\ln x)^{(\sin x)}$$

$$\frac{3}{\csc^3 x}$$

$$\frac{x^2+x+2}{x^3+7}$$

$$\cosh \arctan y^4$$

$$17^\pi + \cosh^2 x - \sinh^2 x$$

$$z^4 \arctan(3z)$$

$$(\sec 3x)(\sinh 4x)$$

$$x^x + \log_3(\tanh x)$$

$$e^8 + x^4 - \cos x$$

$$\csc(e^w + \sinh w)$$

$$\frac{4\pi \cos^2 x}{x + \sinh 3x}$$

$$e^{(2 \ln \tanh(x))}$$

$$\ln\left(\frac{1}{t^3+t+2}\right)$$

$$7^{3x} + \sin(x^5)$$