

Student Name: _____

Score: _____

Derivatives of Logarithmic Functions

Find the derivatives of logarithmic functions:

$$y = \ln 5x$$

$$y = \ln x^2$$

$$y = 2 \ln (3$$

$$- 2x)^3$$

$$y = \ln (\sin$$

$$x$$

$$y = \ln (\cos$$

$$+ 3) \ln(x - 1)$$

$$y = \ln(70x$$

$$y = \frac{2}{5} \ln (-4x + 1)$$

$$y = \frac{-1}{2} \ln \left(x + \frac{5}{3}\right)$$

PREVIEW

Gain complete access to the largest collection of worksheets in all subjects!

Members, please log in to download this worksheet.

Not a member? Please sign up to gain complete access.

www.mathworksheets4kids.com

Student Name: _____

Score: _____

Answer key

Derivatives of Logarithmic Functions

$$\frac{dy}{dx} = \frac{1}{x}$$

$$\frac{dy}{dx} = \frac{2}{x}$$

$$\frac{dy}{dx} = \frac{12x}{3x^2 - 1}$$

$$\frac{dy}{dx} = \frac{-6}{-2x}$$

$$\frac{dy}{dx} = 2 \cot 2$$

$$(1x)^2 (3 + \ln x)$$

$$\frac{dy}{dx} = -2x \tan$$

$$\frac{\ln(x+3)}{x-1} + \frac{\ln(x-1)}{x+3}$$

$$\frac{dy}{dx} = \frac{140x}{70x^2 + 2}$$

$$\frac{dy}{dx} = -\frac{8}{5(-4x+1)}$$

$$\frac{dy}{dx} = -\frac{1}{2\left(x + \frac{5}{3}\right)}$$

PREVIEW

Gain complete access to the largest collection of worksheets in all subjects!

Members, please log in to download this worksheet.

Not a member? Please sign up to gain complete access.

www.mathworksheets4kids.com