3-7 HW

20 questions

Course Info | Instructor Name | Student Name

Question 1 of 20

Compute the derivative of the function y using derivative rules.

$$y = \left(9x^4 + 5\right)^3$$

(Express numbers in exact form. Use symbolic notation and fractions where needed.)

$\frac{dy}{dx} =$

Question 2 of 20

Use the Chain Rule to find the derivative.

$$y = e^{1-3x^8}$$

(Use symbolic notation and fractions where needed.)

$y' =$

Question 3 of 20

Use the General Power Rule, Exponential Rule, or the Chain Rule to compute the derivative.

$$y = e^{20x-17}$$

(Use symbolic notation and fractions where needed.)

$\frac{d}{dx}e^{20x-17} =$

Question 4 of 20

Use the General Power Rule to compute the derivative.

$$y = \left(x^2 + 23\right)^{-2}$$

(Use symbolic notation and fractions where needed.)

$\frac{d}{dx}y =$

Question 5 of 20

Use the General Power Rule to compute the derivative.

$y = \left(4 - 9x - 10x^2\right)^5$

(Use symbolic notation and fractions where needed.)

$\frac{dy}{dx} =$

Question 6 of 20

Compute the derivative using derivative rules.

$y = \left(x^5 + 8\right)^9$

(Express numbers in exact form. Use symbolic notation and fractions where needed.)

$\frac{dy}{dx} =$

Question 7 of 20

Calculate the following derivative.

(Use symbolic notation and fractions where needed.)

$\frac{d}{dx}\left(9e^{-x} + 9e^{-3x}\right) =$

Question 8 of 20

Calculate the following derivative.

(Use symbolic notation and fractions where needed.)

$\frac{d}{dx}\left(13e^{8x} + 12e^{-4x}\right)^9 =$

Question 9 of 20

Use the General Power Rule to find the derivative of $y = \sqrt{4x - 5}$.

(Use symbolic notation and fractions where needed.)

$y' =$

Question 10 of 20

Compute the derivative.

$$y = \cos\left(te^{-4t}\right)$$

(Express numbers in exact form. Use symbolic notation and fractions where needed.)

$y' =$

Question 11 of 20

Compute the derivative.

$$y = \sqrt{\frac{z+2}{z-2}}$$

(Express numbers in exact form. Use symbolic notation and fractions where needed.)

$y' =$

Question 12 of 20

Find the derivative of y using the appropriate rule or combination of rules.

$$y = \left(x^3 + \cos(x)\right)^{-5}$$

(Express numbers in exact form. Use symbolic notation and fractions where needed.)

$\frac{dy}{dx} =$

Question 13 of 20

Use the Chain Rule to find the derivative.

$y = \cos^9(e^{4\theta})$

(Express numbers in exact form. Use symbolic notation and fractions where needed.)

$\frac{dy}{d\theta} =$

Question 14 of 20

Compute the derivative of the function y using derivative rules.

$y = \sqrt{9 + 2x + \sin(x)}$

(Express numbers in exact form. Use symbolic notation and fractions where needed.)

$\frac{dy}{dx} =$

Question 15 of 20

Use the General Power Rule, Exponential Rule, or the Chain Rule to compute the derivative.

$y = \cos^6(\theta + 19)$

(Use symbolic notation and fractions where needed.)

$\frac{dy}{d\theta} =$

Question 16 of 20

Calculate the following derivative.

(Use symbolic notation and fractions where needed.)

$\frac{d}{dx}\left(\cot^9\left(x^{11}\right)\right) =$

Question 17 of 20

Calculate the following derivative.

(Use symbolic notation and fractions where needed.)

$\frac{d}{dx}\left(\tan^7(x) + \tan\left(x^8\right)\right) =$

Question 18 of 20

Calculate the derivative.

(Use symbolic notation and fractions where needed.)

$\frac{d^3}{dx^3}(8 - 3x)^6 =$

Question 19 of 20

Calculate the derivative.

(Use symbolic notation and fractions where needed.)

$\frac{d^3}{dx^3}4\sin(4x) =$

Question 20 of 20

Calculate the derivative.

(Use symbolic notation and fractions where needed.)

$\frac{d^2}{dx^2}\left(x^2 + 10\right)^4 =$