

D

Answer:

$$\frac{1}{7}$$

Find the Derivative:

$$f(x) = \sin(x^2 - 1)$$

R

Answer:

$$f'(x) = 2x \cos(x^2 - 1)$$

Find the Derivative:

$$f(x) = xe^{3x-2}$$

A

Answer:

$$f'(x) = e^{3x-2} (3x + 1)$$



Find the Derivative:

$$f(x) = \tan^{-1}(\sqrt{x})$$

G

Answer:

$$f'(x) = \frac{1}{2\sqrt{x}(1+x)}$$

Find the Derivative:

$$f(x) = \frac{3^{2x}}{\sec x}$$

O

Answer:

$$f'(x) = \frac{3^{2x} (2 \ln 3 - \tan x)}{\sec x}$$

Use implicit differentiation to find an equation of the tangent line to the curve at the point (1,1):

$$x^2 - y^2 = 2xy - x$$

N

Answer:

$$y - 1 = \frac{1}{4}(x - 1)$$

Find the equation of the line tangent to

$$f(x) = e^{-x^2}$$

At $x = 1$

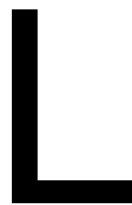
F

Answer:

$$y - \frac{1}{e} = \frac{-2}{e}(x - 1)$$

Find the Derivative:

$$f(x) = \left(1 + \frac{3}{x}\right)^{2x}$$



Answer:

$$f'(x) = \left[\frac{-6}{x+3} + 2 \ln \left(1 + \frac{3}{x} \right) \right] \left(1 + \frac{3}{x} \right)^{2x}$$

Find the Derivative:

$$f(x) = x^5 \sqrt{8 - 2x}$$

I

Answer:

$$f'(x) = \frac{x^4(40 - 11x)}{\sqrt{8 - 2x}}$$

Find the Derivative:

$$f(x) = \frac{3}{(4x^2 - 7)^2}$$

E

Answer:

$$f'(x) = \frac{-48x}{(4x^2 - 7)^3}$$

Evaluate:

$$\lim_{h \rightarrow 0} \frac{\tan [7(x + h)] - \tan(7x)}{h}$$

S

Answer:

$$f'(x) = 7 \sec^2(7x)$$

If g and f are inverses of each other find

$$f'(3) :$$

| x | g | g' |
|-----|-----|------|
| -1 | 3 | 7 |
| 2 | 7 | 5 |
| 3 | -1 | 2 |
| 5 | 2 | 0 |