

Precalc 15.6

Use the product rule to find derivatives

Use the quotient rule to find derivatives

Quiz TBA 15.5-15.6

Friendly functions:

- y=e^x
- y=sinx
- y=cosx
- y=ln/x/

$$y' = -5 \sin x - 3 \cos x$$

$$y = 5 \cos x - 3 \sin x$$

$$y = 3 \ln|x| - 2e^x - \sqrt{x}$$

$$y' = 3 \cdot \frac{1}{x} - 2e^x - \frac{1}{2}x^{-\frac{1}{2}}$$

$$y' = \frac{3}{x} - 2e^x - \frac{1}{2\sqrt{x}}$$

May 5-8:18 PM



Mar 21-8:21 AM

Product rule:

(Twinkle twinkle)

1d2 + 2d1 that's the way we get it done!

$$y = x^2(\cos x)$$

$$y = e^x(\sin x)$$

$$y = (\sin x)(\cos x)$$

$$y = x^2(\cos x)$$

$$y' = (x^2)(-\sin x) + (\cos x)(2x)$$

$$y = (x+3)(x-2)$$

$$y = x^2 + x - 6$$

$$y' = 2x + 1$$

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$$y = e^x \sin x$$

$$y' = e^x(\cos x) + (\sin x) \cdot e^x$$

$$y' = e^x(\cos x + \sin x)$$

Mar 25-9:37 AM

$$y = (\sin x)(\cos x)$$

$$y' = (\sin x)(-\sin x) + (\cos x)(\cos x)$$

$$= -\sin^2 x + \cos^2 x$$

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practice & exit ticket

$$y = \underline{2e^x} + \underbrace{x^2 \sin^2 x}_{\frac{d^1}{dx} \frac{d^2}{dx^2}} - \underbrace{4x \cos^2 x}_{\frac{d^1}{dx} \frac{d^2}{dx^2}}$$

w B 15.6 1-10

$$y' = 2e^x + x^2(\cos x) + (\sin x)2x -$$

$$[4x(\sin) + (\cos x)4]$$

$$= 2e^x + x^2 \cos x + 2x \sin x + 4x \sin x$$

$$- 4 \cos x$$

$$= 2e^x + \cos x(x^2 - 4) + \sin x(2x + 4x)$$

$$= 2e^x + (\cos x)(x^2 - 4) + (\sin x)(6x)$$

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$$2e^x \cdot \ln x$$

$$2 \left(\right)$$

$$2e^x \ln x$$

$$2 \left(e^x \cdot \frac{1}{x} + \ln x \cdot e^x \right) \quad \text{---}$$

$$2e^x \left(\frac{1}{x} + \ln x \right) \quad \text{---}$$

Mar 24-1:19 PM

$$S = x^2 \cdot y^3$$

$$S' =$$

Mar 25-9:53 AM

Attachments

AngelsWeHaveHeardOnHigh1.mid