

Group project

Find  $y'$  if

①  $y = \sqrt{7 + x \cos x}$

$$= \frac{1}{2} (7 + x \cos x)^{-\frac{1}{2}} \cdot [x(-\sin x) + \cos x]$$

5/5

②  $y = \tan\left(\frac{\sin x}{x}\right)$

$$= \sec^2\left(\frac{\sin x}{x}\right) \cdot \left(\frac{-\sin x}{x^2} + \frac{\cos x}{x}\right)$$

~~5/5~~

+ 2

7/5

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$$\textcircled{1.} \quad y = \sqrt{7 + x \cos x}$$

$$y' = \frac{1}{2} (7 + x \cos x)^{-\frac{1}{2}} \cdot (\cos x + x \sin x)$$

$$-x \sin x$$

$$\frac{4}{5}$$

$$\textcircled{2.} \quad y = \tan\left(\frac{\sin x}{x}\right)$$

$$y' = \sec^2\left(\frac{\sin x}{x}\right) \cdot \left(\frac{x \cos x - \sin x}{x^2}\right)$$

$$+ 2$$

$$\frac{6}{5}$$

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$$1) \cdot y = \sqrt{7 + x \cos x} \longrightarrow (7 + x \cos x)^{\frac{1}{2}}$$

$$= \frac{1}{2} (7 + x \cos x)^{-\frac{1}{2}} \cdot x$$

$$= \frac{1}{2} (7 + x \cos x)^{-\frac{1}{2}} \left[ -\sin x + \cos x \right] \quad \frac{4}{5}$$

$$= \frac{-\sin x + \cos x}{2 \sqrt{7 + x \cos x}} \quad \#$$

$$2) y = \tan \left( \frac{\sin x}{x} \right)$$

$$= \sec^2 \left( \frac{\sin x}{x} \right) \frac{x d^1 \sin x - \sin x dx}{x^2} \quad \checkmark$$

$$= \sec^2 \left( \frac{\sin x}{x} \right) \frac{(x)(\cos x)(1) - (\sin x)(1)}{x^2} \quad \checkmark$$

$$= \sec^2 \left( \frac{\sin x}{x} \right) \frac{(x)(\cos x)(1) - (\sin x)(1)}{x^2} \quad \checkmark$$

$$= \sec^2 \left( \frac{\sin x}{x} \right) \frac{x \cos x - \sin x}{x^2} \quad \checkmark$$

$$= \sec^2 \left( \frac{\sin x}{x} \right) \left( \frac{x \cos x - \sin x}{x^2} \right) \quad \checkmark \quad \#$$

+ 2

$\frac{6}{5}$

Group project

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Find  $y'$  if

①  $y = \sqrt{7 + x \cos x}$

②  $y = \tan\left(\frac{\sin x}{x}\right)$

$\frac{4}{5}$

need brackets

①  $y = \sqrt{7 + x \cos x} = (7 + x \cos x)^{\frac{1}{2}}$

$$y' = \frac{1}{2} [7 + x \cos x]^{-\frac{1}{2}} \cdot [x(-\sin x) + \cos x]$$

②  $y = \tan\left(\frac{\sin x}{x}\right)$

$$y' = \sec^2\left(\frac{\sin x}{x}\right) \cdot \frac{(x \cos x) - (\sin x \cdot 1)}{x^2} + 2$$

$\frac{6}{5}$

Group Project Find  $y'$  if

①  $y = \sqrt{7+x\cos x}$

②  $y = \tan\left(\frac{\sin x}{x}\right)$

4  
5

need  
brackets

①  $y = \sqrt{7+x\cos x}$

$y' = \frac{1}{2} [7+x\cos x]^{-\frac{1}{2}} \cdot [(x)(-\sin x) + \cos(x)(1)]$  ANS

②  $y = \tan\left(\frac{\sin x}{x}\right)$

+ 1

$= \tan(\sin x \cdot x^{-1})$

$= \sec^2(\sin x \cdot x^{-1}) \cdot [\sin x \cdot (-1x^{-2}) + x^{-1} \cdot \cos x]$  ✘

↑  
need parentheses

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# Group project /°

Find  $y'$  if

$$1) y = \sqrt{7 + x \cos x}$$

$$y' = \frac{1}{2} [7 + x \cos x]^{-\frac{1}{2}} \cdot [x(-\sin x) + \cos x]$$

need brackets

4  
5

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