Question 1

1 / 1 pts

If $y = e^{2x} sin3x - cosx$, please find $y'(\frac{\pi}{6})$.

If $y = e^{2x}\sin 3x - \cos x$, please find $y'(\frac{\pi}{6})$.

Note: To make sure that students can see the questions, two versions have been prepared: the text version (black) and the image version (blue). They have the same content, but the image version will be used as the standard because sometimes the system may not be able to show symbols in the text mode.

$2e^{\frac{\pi}{3}} - \frac{\sqrt{3}}{2}$

○ $2e^{\frac{\pi}{3}} - \frac{\sqrt{3}}{2}$

$2e^{\frac{\pi}{3}} + \frac{\sqrt{3}}{2}$

● $2e^{\frac{\pi}{3}} + \frac{\sqrt{3}}{2}$

$3e^{\frac{\pi}{6}} + \frac{\sqrt{3}}{2}$

○ $3e^{\frac{\pi}{6}} + \frac{\sqrt{3}}{2}$

$\frac{5\sqrt{2}}{2}e^{\frac{\pi}{3}} + \frac{\sqrt{3}}{2}$

○ $\frac{5\sqrt{2}}{2}e^{\frac{\pi}{3}} + \frac{\sqrt{3}}{2}$

Question 2

1 / 1 pts

If $y = \frac{cos(x^2)}{x^3}$, please find the derivative of y.

If $y = \frac{\cos(x^2)}{x^3}$, please find the derivative of y.

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$2x^{-2}cos(x^2) + 3x^{-4}cos(x^2)$

$2x^{-2}\cos(x^2) + 3x^{-4}\cos(x^2)$

$-2x^{-2}cos(x^2) + 3x^{-4}cos(x^2)$

$-2x^{-2}\cos(x^2) + 3x^{-4}\cos(x^2)$

$2x^{-2}sin(x^2) + 3x^{-4}cos(x^2)$

$2x^{-2}\sin(x^2) + 3x^{-4}\cos(x^2)$

$-2x^{-2}sin(x^2) - 3x^{-4}cos(x^2)$

$-2x^{-2}\sin(x^2) - 3x^{-4}\cos(x^2)$

Question 3

1 / 1 pts

If $y = 2ln(\sqrt{x} + 6)$ please find the derivative of y.

If $y = 2\ln(\sqrt{x} + 6)$, please find the derivative of y.

Note: To make sure that students can see the questions, two versions have been prepared: the text version (black) and the image version (blue). They have the same content, but the image version will be used as the standard because sometimes the system may not be able to show symbols in the text mode.

$\frac{2}{\sqrt{x}+6}$

$\frac{2}{\sqrt{x}+6}$

$\frac{1}{x-6\sqrt{x}}$

$\frac{1}{x-6\sqrt{x}}$

$\frac{1}{x+6\sqrt{x}}$

$\frac{1}{x+6\sqrt{x}}$

$\frac{1}{\sqrt{x}}$

$\frac{1}{\sqrt{x}}$