

Quiz #1:

Using the $\varepsilon - \delta$ argument prove that $\lim_{x \rightarrow 3} \sqrt{7x + 4} = 5$

Quiz #2:

Find the derivative of $f(x) = \frac{\sqrt[3]{\ln^2(\cos \frac{1}{x^3})} e^{x^4}}{x\sqrt{2-x^\pi}}$

Quiz #3:

- (a) Find $(\cot^{-1} x)'$. Show all the steps
- (b) Linearize $f(x) = x \cos x$ nearby $\pi/3$

Quiz #4:

Find the limits

$\lim_{x \rightarrow 0} (1 + \sin 5x)^{\cot 3x}$ and $\lim_{x \rightarrow \pi/3} \frac{2 \cos x - 2 \sin x + \sqrt{3} - 1}{x - \pi/3}$