

Quiz 1 Solution

January 12, 2018

1. (2 points)

(a) Simplify $e^{4\ln(x)}$

Solution:

$$\begin{aligned} e^{4\ln(x)} &= e^{\ln(x^4)} \\ &= x^4 \end{aligned}$$

Answer: x^4

(b) Simplify $\ln(10e^4)$

Solution:

$$\begin{aligned} \ln(10e^4) &= \ln(10) + \ln(e^4) \\ &= \ln(10) + 4 \end{aligned}$$

Answer: $\ln(10) + 4$

2. (2 points) Approximate $\lim_{x \rightarrow -1^+} \left(\frac{x+1}{\sin(x+1)} \right)$ numerically.

Solution: Make sure your calculator is in radians! Then, approximate the limit as x approaches -1 from the right by filling in the following table (or a similar table):

x	-1	-.999	-.99	-.9
$f(x)$	undefined	1.00000	1.00002	1.00167

Answer: 1

3. (1 point) What is your preferred name?

Answer: Answers will vary.