Homework 6, 93.00/120.00 (77.50%)

October 22, 2019

Problem 5 score: 10/10

ok

Problem 11 score: 10/10

ok

Problem 15 score: 10/10

ok

Problem 22 score: 9/10

did not cancel out x in $x\frac{1}{x\ln 5}$.

Problem 25 score: 0/10[1]

$$y' \neq \frac{1}{1/\cos x}$$

where is $\left(\frac{1}{\cos x}\right)'$??

Problem 30 score: 5/10 [2]

I $\ln\ln x > 0 \not\Longrightarrow \ln x > e\,(\Longrightarrow \ln x > 1)$ – NOT ok; also $\ln x > 0 \not\Longrightarrow x > 0\,(\Longrightarrow x > 1)$.

II

[1] similar problems: 23,24
[2] similar problems: 27,29

Problem 34 score: 10/10

ok

Problem 45 score: 10/10

ok

Problem 49 score: 10/10

ok

Problem 52 score: 9/10[3]

$$x^y = y^x$$
$$\ln x^y = \ln y^x$$

what if x or y are zero?

Problem 55 score: 10/10

ok

Problem 56 score: 0/10 [4]

You can do this **without** l'Hospital's Rule. You cannot use it at this point, since you haven't learned it yet. What is more important, you **did not** show that you can apply l'Hospital's rule.

[3] similar problems: find y' if $\sin(x)^{\cos y} = \cos(y)^{\sin x}$; find y' if $\cos(x)^{\sin y} = \sin(y)^{\cos x}$;
[4] similar problems: do this without l'Hospital's rule