Homework 13 (Chap. 5.3), 121.00/150.00 (80.67%)

November 30, 2019

Problem 3 score: 5/10[1]

(a) NOT ok, $g(6) = 2$, should be 3;

(b) OK

(c) OK

(d) NOT ok

Problem 18 score: 10/10

OK

Problem 22 score: 10/10

OK

Problem 37 score: 10/10

OK

Problem 43 score: 10/10

OK

Problem 56 score: 10/10

OK

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[1]similar problems: 4,5

Problem 63 score: $0/10^2$

Your final answer is

$$\int_{\cos x}^{\sin x} \ln\left(1 + 2v\right) dv = \ln\left(1 + 2\sin x\right)\cos x + \ln\left(1 + 2\cos x\right)\sin x.$$

This equality is wrong.

Problem 66 score: $0/10^3$

The following formula you wrote is wrong:

$$F'(x) = \begin{cases} f(t), & x \geq 1, \\ -f(t), & x \leq 1, \end{cases}$$

, while it should be

$$F'(x) = f(t).$$

Problem 70 score: 10/10

(a) OK

(b) OK

Problem 74 score: $8/10^4$

(a) what about 10 (the right endpoint), isn't it a local maximum?; (2)

(b) OK (2.5)

(c) what about [9,10]? (1.5)

(d) you didn't draw part after 9; (2)

Problem 76 score: 10/10

OK

Problem 78 score: 10/10

OK

Problem 81 score: 10/10

OK

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[2]similar problems: 64,65
[3]similar problems: 67,68
[4]similar problems: 75,77

Problem 83 score: 10/10

OK

Problem 85 score: 8/10[5]

(a) OK

(b) OK

(c) NOT ok. Don't you also have to show that minimum CANNOT be attained at $t \to 0+$ and $t \to \infty$?

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[5]similar problems: 84,86