

## Homework 3, 74.00/100.00 (74.00%)

October 22, 2019

**Problem 2 score: 10/10**

ok

**Problem 9 score: 0/10<sup>1</sup>**

$$y' = \frac{2 - \tan(x) - x(-\sec^2 x)}{(2 - \tan(x))^2}.$$

**Problem 16 score: 8/10<sup>2</sup>**

where did  $x$  come from??

**Problem 22 score: 10/10**

ok

**Problem 35 score: 8/10<sup>3</sup>**

(a) ok

(b) NOT ok (if equilibrium position is at  $x = 0$ ,  $x(2\pi/3) > 0$  and  $v(2\pi/3) > 0$ , why does it move towards the equilibrium?)

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<sup>1</sup>similar problems: 11,12

<sup>2</sup>similar problems: 14,15

<sup>3</sup>similar problems: repeat (a) and (b) for  $x(t) = 4 \sin(2t)$ ,  $t = 2\pi/3$  and  $x(t) = 5 \cos(3t)$ ,  $t = 5\pi/12$

**Problem 37 score: 8/10<sup>4</sup>**

Did you write

$$x(\theta) = L \cos \theta?$$

If no, I will add two points.

**Problem 39 score: 0/10<sup>5</sup>**

I don't see the answer

**Problem 47 score: 10/10**

ok

**Problem 51 score: 10/10**

ok

**Problem 57 score: 10/10**

ok

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<sup>4</sup>similar problems: 38  
<sup>5</sup>similar problems: 40,41