Quiz: The Last

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5 Dec 2014

This test totals 15 points and you get 20 minutes to do it. Good luck! Show neat steps and remember to write the final answer in the blanks provided.

1. (4 pts) Find $y(x)$ which solves the following initial value problem

$$y' = \frac{\cos x}{1 - \sin x}, \quad y(0) = 2$$

Answer: $y(x) =$
2. (6 pts) Find $y(x)$ which solves the following initial value problem. Also find an interval containing the initial value $x_0$ on which the solution is defined.

$$y' = 2 - \frac{y}{x - 1}, \quad y(2) = 1$$

Answer: $y(x) = \ldots$

Domain: \ldots
3. (5 pts) Find $y(x)$ which solves the following initial value problem. If you are not able to get $y$ explicitly as a function of $x$, leave it as an implicitly defined equation. But remember to solve for any constants!

$$y' = \frac{e^x}{6y + \sin y}, \quad y(0) = \frac{\pi}{2}$$

Answer: __________________________