

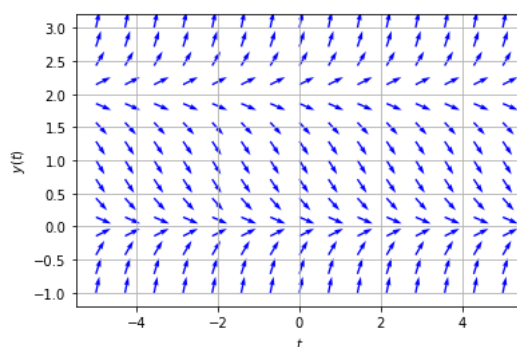
Math 308 Quiz 1

Wednesday, January 24, 2024

Name: _____

Directions: Please upload a PDF file of your solutions on Gradescope by Friday 26 January 10pm. You may discuss in groups but please submit your own work.

1. (4 points) Identify the differential equation that produces the following slope field. Circle your solution.



(a) $y' = y(2 - y)$ (b) $y' = y(y - 2)$, (c) $y' = y - 2$, (d) $y' = 2 - y$

2. (8 points) Find the general solution of the differential equation

$$y' + \frac{1}{t}y = 2e^{t^2}, \quad t > 0.$$

3. (8 points) A cake is removed from an oven and its temperature is measured at $300^{\circ}F$. After 5 minutes, its temperature is $200^{\circ}F$. How long will it take for the cake to cool to room temperature of $65^{\circ}F$?