Calculus MA1001-A Quiz 06

National Central University, Oct. 25 2018

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Problem 1. (4pts) The graph of $y^2 = x^3$ is called semicubical parabola. Determine the constant b so that the line $y = -\dfrac{1}{3}x + b$ meets this graph orthogonally.

Problem 2. (3pts) Find the extreme value of the function $y = \dfrac{x+1}{x^2 + 2x + 2}$ on $[-1, 2]$, and where they occur.

Problem 3. (3pts) Show that if $f'(x) = 0$ for all x in (a, b), then f is a constant function.