Quiz 2

MA 262
Artur's Class

January 24, 2012

Problem 1

Find a nonconstant solution $y = y(x)$ of

$$\frac{dy}{dx} = \frac{2}{3}(y-1)^{1/2}$$

satisfying $y(1) = 1$. This solution is defined over which domain?

Problem 2

Use an integrating factor to find a solution $y = y(x)$ of

$$(y - e^x)\, dx + dy = 0$$

satisfying $y(1) = 1$. Denote clearly which integrating factor you used.