

LAST NAME:

FIRST NAME:

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**Math 65B - Summer 2016**

Quiz 3: Tuesday June 14, 2016

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1. (1 point) Find the arc length of the following function from  $x = 0$  to  $x = \frac{\pi}{4}$ :

$$y = \ln(\sec(x))$$

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Please, show all work.

2. (1 point) The given curve is rotated around the  $x$ -axis. Find the area of the resulting surface for  $1 \leq y \leq 2$ :

$$x = \frac{1}{3}(y^2 + 2)^{\frac{3}{2}}$$

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Please, show all work.