Math 102

Quiz#2

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Name:

ID No.:

Serial No.:

1. Find the volume of the solid if the region enclosed by the graph of $y = \frac{1}{x}$, the x −axis, $x = 1$, $x = 5$ is revolved about: (Just set up the integral formula)
   a. the y −axis.
   b. the line $y = -4$.

2. Find the volume of the solid if the region enclosed by the graph of $y = \sin x$ and $y = \cos x$, from $x = \frac{\pi}{2}$, to $x = \frac{3\pi}{2}$ is revolved about the axis $x = -\pi$. (Just set up the integral formula)

3. Find the length of the curve $y = \int_{-2}^{x} \sqrt{3t^4 - 1}dt$ when $-2 \leq x \leq -1$.

4. Find the area of the surface generated when the curve $y = \sqrt{2x - x^2}$ is revolved about the x-axis when $1 \leq x \leq 2$.