Math 102

Quiz#2

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Name:

Serial No.:

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1. Evaluate the **area** of the region enclosed by the curves $-2y^2 = x$ and $y - x = 1$.
(Just set up the integration formula)

2. Find the value of $I = \int_{-9}^{-1} (x+5)^8 \cot(x+5)\, dx$.

3. The region bounded by the parabolas $y^2 = x$ and $y = x^2$ is rotating about an axis, find the **volume** of the resulted solid if the axis of rotation is
   a. $x = -2$,
   b. $y = -\pi$. (Just set up the integration formula)

4. Evaluate $I = \int_1^e \frac{1}{x(1+\ln x^2)^3}\,dx$.