

King Fahd University of Petroleum and Minerals
Department of Math & Stat
Math 102.28 Quiz I Term 082

Name: _____ ID#: _____

Show all your work in every problem.

1. Solve: $\int_0^1 \frac{x^2}{3+x^6}.$

2. Find the area of the region bounded by the graphs of $y + x^2 = 6$ and $y + 2x - 3 = 0$.

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1. The region in the first quadrant bounded by $y = \frac{1}{8}x^3$ and $y = 2x$ is revolved about the y -axis. Set up the integral for the volume of the resulting solid. Do not solve the integral.

2. Evaluate the limit $\lim_{n \rightarrow \infty} \sum_{i=1}^n \frac{2}{n} \left(1 + \frac{2i-1}{n}\right)^{1/3}$ by expressing it as a definite integral.