KFUPM | Term 172 | Date:20/2/2018

Mathematics & Statistics | MATH 102 | Duration: 20 minutes

Quiz# 3

Name: | ID #: | Section:

Q1: The limit $\lim_{n\to\infty} \sum_{i=1}^{n} sec^2\left(\frac{i\pi}{4n}\right).\frac{\pi}{4n}$ is equal to

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Q2: For $f(x) = \begin{cases} |x|, & -3 \le x < 3 \\ 2(x-3), & 3 \le x \le 6 \end{cases}$ the value if the integral $\int_{-3}^{6} f(x)dx =$

Q3. The area of the region enclosed by the curves

$y = \sin 2x \; and \; y = \tan(x), \quad \frac{-\pi}{4} \leq x \leq \frac{\pi}{4}$ is equal to

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Q4. If the region enclosed by the curves y=x and $y=x^2$ is rotated about the line $x = -1$, then the volume of the solid obtained is