Math 102

Name:

Quiz#5A

Serial No.:

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1. Evaluate:

   a. $\int_0^1 \frac{dx}{\sqrt{1-x^2}}$

   b. $\int_0^\infty \frac{dx}{(1+x)\sqrt{x}}$

2. Find the surface area if $y = \sqrt{2x - x^2}$, over $\frac{1}{2} \leq x \leq \frac{3}{2}$ is rotated about the *x*-axis

3. Test whether the sequence converge or diverge, if it converges find the limits:

$$a_n = \frac{\sin n}{\pi^n}$$