My NAME is: SECTION:

Problem	1	2	3	4	5	6	7	Total
Score								

MAT 132 Calculus II
Midterm 1 Sample

Oct 11, 2006

1. (6 points) Evaluate $\int_e^{e^2} \frac{1}{x\sqrt{lnx}}\, dx$
2. (6 points) Evaluate $\int \sin\sqrt{\mathrm{x}}\ \mathrm{dx}$ by parts.
3. (6 points) Evaluate $\int \frac{2x^2+5}{(x^2+1)(x^2+4)}\, dx$.
4. (5 points) Use the trapezoidal and midpoint rule to approximate the value $\int_0^6 \frac{1}{1+x^2+x^4}\, dx$ using $n = 6$. Do not simplify.
5. (6 points) Find the area of the region bounded by the curves $y = |x|$ and $y = x^2 - 2$.
6. (6 points) Find the volume of the solid obtained by rotation the region bounded by $y = x$ and $y = \sqrt{x}$ about the $y = 1$.
7. (5 points) Find the arc length of the curve $x = y^{3/2}$, $0 \leq y \leq 1$.