Math 104 Rimmer
Hand in Hw # 4

Name_____
Rec. # _____

Fall 2011

4. Evaluate $\displaystyle\int_1^{e^3} \frac{\ln x}{\sqrt[3]{x^2}}\,dx.$

(A) $3e-9$ (B) $3e^2-9$ (C) $9e^2-3$ (D) $3e^2$ (E) $9e^2$ (F) 9 (G) $9e-3$ (H) $3e$

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Name_____
Rec. # _____

Spring 2011

5. Evaluate $\int_0^{\pi/2} x \sin(2x)\, dx.$

(a) $\pi/4$ (b) $\pi/3$ (c) $\pi/2$ (d) π (e) 2π (f) 3π

Math 104 Rimmer
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Name_____
Rec. # _____

Fall 2010

1. Find the area bounded by the y-axis, the graph of $y = e^x$ and the graph of $y = xe^x$.

(A) 1 (B) 2 (C) $e-2$ (D) e (E) $e+2$ (F) $2e$ (G) e^2-e (H) $3e-2$

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Spring 2010

5. Evaluate $\int_0^{\pi/2} x^2 \sin x \, dx.$

(a) $\pi/4$ (b) -1 (c) $\pi - 2$ (d) $\ln(\pi/2)$ (e) $\pi - e$ (f) 1.14

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Rec. # _____

Fall 2007

1. Find the average value of the function $f(x) = x\cos(2x)$ on the interval $0 \le x \le \frac{\pi}{4}$.

a) $\frac{1}{2\pi}$ b) $\frac{1}{2} - \frac{1}{\pi}$ c) $\frac{1}{2} - \frac{1}{2\pi}$ d) $1 - \frac{1}{\pi}$ e) $\frac{1}{4} - \frac{1}{2\pi}$ f) $\frac{1}{4} - \frac{1}{\pi}$

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Fall 2007

8. Find the volume of the solid of revolution obtained by revolving the region between the graph of $y = e^{\sqrt{x}}$ and the x-axis for $0 \le x \le 1$ around the x-axis.

a) $\frac{\pi}{2}(e-1)$ b) $\frac{\pi}{2}(e^2-1)$ c) $\frac{\pi}{2}(e+1)$ d) $\frac{\pi}{2}(e^2+1)$ e) $\frac{\pi}{2}(e-3)$ f) $\frac{\pi}{2}(e^2-3)$

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Rec. # _____

Fall 2004

1. Evaluate $\int_1^e x^2 \ln x \, dx$.

a) 0 b) 1 c) $\ln 2 - 1$ d) $\frac{2}{9}e^3 + \frac{1}{9}$ e) $\frac{2}{9}e^2 + \frac{1}{3}$ f) $\frac{1}{3}e^3 - 1$

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ANSWERS:

FALL 2011 # 4: F

SPRING 2011 # 5: A

FALL 2010 # 1: C

SPRING 2010 # 5: C

FALL 2007 # 1: B

FALL 2007 # 8: D

FALL 2004 # 1: D