Math 104 Name_____
Hand in HW 2 Recit. # _____

Spring 2016 LPS

1. The base of a solid is a the region between the $x-$axis, $y=\sqrt{x}$, $x=4$, Each cross section perpendicular to the $x-$axis is a semicircle with diameter running along the base. Find the volume.

(A) $\sqrt{2}$ (C) $2\sqrt{3}$ (E) $\frac{5\pi}{6}$ (G) π

(B) $\frac{\pi}{9}$ (D) $\frac{\pi}{6}$ (F) $\frac{\pi}{2}$ (H) $\frac{\pi}{4}$

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Fall 2010

3. Find the volume of the solid obtained by rotating the region bounded by the x-axis, the line $y = 1$, the curve $y = \ln(x)$, and the line $x = 1/2$ about the y-axis.

(A) $\pi(e-2)$ (B) $2\pi\left(\frac{e^2}{4}-\frac{3}{4}\right)$ (C) $2\pi\left(\frac{e^2}{4}+\frac{3}{4}\right)$ (D) $\pi\left(\frac{1}{2}e^2-\frac{3}{4}\right)$

(E) $\frac{\pi}{8}(4e^2-3-2\ln 2)$ (F) $\pi\left(e-\frac{3}{2}\right)$ (G) $\frac{e\pi}{2}$ (H) $\pi\left(\frac{3}{4}+\frac{e^2}{2}-e\right)$

Math 104 Name_____

Hand in HW 2 Recit. # _____

Spring 2014 # 1

1. Find the volume of the solid generated by revolving the region bounded by the graphs of $y = e^x$, $y = 0$, $x = 0$, and $x = 2$ about the line $x-$axis.

(A) $\frac{\pi}{4}e^2$

(B) $\frac{\pi}{2}e^4$

(C) $2\pi e^2$

(D) $\frac{\pi}{4}e$

(E) $\frac{\pi}{2}\left(e^4-1\right)$

(F) $2\pi\left(e^4-1\right)$

(G) $2\pi e^4$

(H) 2π

Math 104 Name_____

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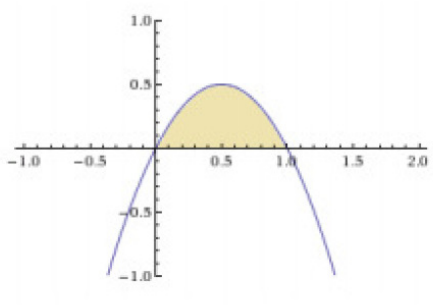
Spring 2014 # 2

2. Find the volume of the solid generated by revolving the region bounded above by the graph of $y = 2x - 2x^2$ and below by the $x-$axis about the line $x = 2.$



(A) $\frac{\pi}{4}$ (E) $\frac{\pi}{3}$

(B) $\frac{\pi}{6}$ (F) $\frac{\pi}{2}$

(C) $\frac{2\pi}{3}$ (G) 2π

(D) $\frac{3\pi}{4}$ (H) π

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Fall 2008

2. The volume of the solid generated by revolving the region bounded by the curves $x = y^2$ and $y = x - 2$ about the y-axis

a) $\frac{20\pi}{3}$ b) $\frac{72\pi}{5}$ c) $\frac{42\pi}{5}$ d) $\frac{13\pi}{2}$ e) $\frac{32\pi}{5}$ f) $\frac{212\pi}{15}$

Math 104 Name_____
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Spring 2007

2. Find the volume of the solid obtained by rotating the region bounded by the curves

$y = e^{x^2}$ and $y = 0$ and $x = 0$ and $x = 2$

about the y-axis.

A.) $4\pi e^4$ B.) $2\pi e^4$ C.) $2\pi(e^4 - 1)$ D.) $\pi(e^4 - 1)$ E.) $\pi\sqrt{e}$ F.) πe

Math 104
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ANSWERS:

Spring 2016 LPS # 1: G

Fall 2010 #3: D

Spring 2014 # 1: E

Spring 2014 #2: H

Fall 2008 # 2: B

Spring 2007 # 2: D