Chapter 7.2 Worksheet Name _____

	Objectives	Rate your understanding of the objective				
Objective 1	Understand how to find a volume by integrating the area of a cross section.	1	2	3	4	5
Objective 2	Calculate solids of revolution with the washer method.	1	2	3	4	5
Objective 3	Calculate solids of revolution with the disk method.	1	2	3	4	5

Warmup

Write, but do not evaluate, an integral that finds the volume formed by revolving these regions around these lines. (By yourself)

1. The region under $y = -x^2 + 4$ in the first quadrant

   (a) The x-axis. (b) The y-axis. (c) $x = 2$

2. The region bounded by $y = x^3$, $y = 0$, and $x = 3$

   (a) The x-axis. (b) The y-axis. (c) $x = 5$

Problems

These problems involve the disk method and the washer method. You may reference Examples 205 and 207 in your example packet. (In groups)

1. Find the volume of a solid formed by revolving the curves $x = \sin(y) + y$ and $x = \sin(y) + 0.5 \cdot y$ around the y-axis, bounded by $y = 0$ and $y = 2\pi$.
2. Consider the region between the curves $y = x^2$, $x = 1$ and $y = 0$. Find the volume of the solid formed by revolving this region about the following lines.

   (a) $y = 0$ (b) $x = 0$ (c) $x = 1$ (d) $y = 1$ (e) $x = 2$ (f) $y = 2$ (g) $y = -1$

Self Quiz

(By yourself)

1. Use the regions described in the Warm Up section and then revolve them around the line $y = 4$. Find integrals for the volumes of the solids formed.

Reflection

	Objectives	Rate your understanding of the objective				
Objective 1	Understand how to find a volume by integrating the area of a cross section.	1	2	3	4	5
Objective 2	Calculate solids of revolution with the washer method.	1	2	3	4	5
Objective 3	Calculate solids of revolution with the disk method.	1	2	3	4	5

Study Skills:

- Remember to read through examples from the book BEFORE your professor goes over the section in class.
- After class read through the examples in your notes from that day and try to do the problems yourself (without looking at your notes).
- After class read through the examples from the book in the section you JUST covered and make sure you understand them.