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

Evaluate the folowing integrals. (By yourself)

1. $\int e^x \sin(x) dx$
2. $\int -\frac{\ln(x)}{x^2} dx$
3. $\int_2^3 -\frac{\sin(\ln(x))}{x} dx$

Problems

These problems involve the disk method. You may reference Example 205 in your example packet. (In groups)

1. Find the volume of a right cylinder with a radius of 5 and height of 10 using the disk method.
2. Find the volume, of the cone from the last problem, that is less than 5 units above the base of the cone.
3. Find the volume of a solid formed by revolving the curve $x = \sin(y) + y$ around the y-axis, bounded by $y = 0$ and $y = 2\pi$.

These problems involve the washer method. You may reference Example 207 in your example packet. (In groups)

1. Given that the solid in the last problem was actually hollow, and had an inner wall defined by revolving the curve $x = \sin(y) + 0.5 \cdot y$, find its volume.
2. Consider the region between the curves $y = x^2$ and $y = \frac{x^2}{4} + 3$. Find the volume of the solid formed by revolving this region about the x-axis.

Self Quiz

(By yourself)

1. Find the general formula for the volume of a cone by writing and evaluating an integral using the disk method. The formula should be in terms of r, the radius of the cone at its base, and h, the height of the cone.
2. Find the general formula for the volume of a square pyramid by writing and evaluating an integral. The formula should be in terms of s, the side length of the base, and h.

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.