

Math 262 - Test - 5
Los Angeles City College - Spring 2005

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Name _____

1. Find the area bounded between the following functions:
 $f(x) = x^2 + 1$ & $g(x) = -x^2 + 4x + 1$ (20 pts.)
2. Find the volume of the solid formed by revolving the region bounded by the graphs of $x^2 = y^4(1 - y^2)$ about the y axis using method of disks. (20 pts.)
3. Find the volume of solid of revolution formed by revolving the region bounded by $f(x) = 3x^2$ & $g(x) = 5x + 2$ about the $y = -2$ using the method of washers. (23 pts.)
4. Find the volume of solid of revolution formed by revolving the region bounded by $f(x) = \sqrt[3]{x-1}$ & $1 \leq x \leq 9$ about the $y = 2$ using the method of cylindrical shells. (22 pts.)
5. Find the average value of $f(x) = x^{\frac{2}{3}} + 1$ for $-1 \leq x \leq 8$. Also find the c value(s) for this function. (15 pts.)
6. **Extra Credit:** (10 pts.)
Find the volume of solid generate when a right isosceles triangle having its two lower corners moving on $y = \sqrt{x}$ & $y = 4x$ for $0 \leq x \leq 4$