Name: _____ Score: _____

Teacher: _____ Date: _____

Volume of revolution – Method of shells

1. Rotate the region bounded by $f(x) = x^3$; $x = 0$; $y = 8$ about the x-axis.	**2.** Rotate the region bounded by $x = 1 + y^2$; $x = 0$; $y = 1$; $y = 2$ about the x-axis.
3. Rotate the region bounded by $x = (y - 2)^2$ The x-axis and the y-axis about the x-axis.	**4.** Rotate the region bounded by $y = \frac{1}{x}$, $x = \frac{1}{2}$, $x = 4$ and the x-axis about the y-axis.
5. Rotate the region bounded by $y = 4x$ and $y = x^3$; about the y-axis. For this problem assume that $x \geq 0$.	**6.** Rotate the region bounded by $y = 4x$ and $y = x^3$; about the x-axis. For this problem assume that $x \geq 0$.