

Name: _____ Score: _____

Teacher: _____ Date: _____

Volume of revolution 3

<p>1. Rotate the region bounded by $y = 2x + 1$; $y = 3$ and the $x = 4$ about the line $y = 10$.</p> <p style="text-align: center;">90π</p>	<p>2. Rotate the region bounded by $x = y^2 - 4$; $x = 6 - 3y$ about the line $y = -8$.</p> <p style="text-align: center;">$\frac{4459}{6}\pi$</p>
<p>3. Rotate the region bounded by $y = x^2 - 6x + 9$; and $y = -x^2 + 6x - 1$ about the line $x = 8$.</p> <p style="text-align: center;">$\frac{640}{3}\pi$</p>	<p>4. Rotate the region bounded by $y = x^2$; $y = 0$; $x = 1$; $x = 2$ about the line $x = 1$.</p> <p style="text-align: center;">$\frac{17}{6}\pi$</p>
<p>5. Rotate the region bounded by $y = x^2$; $y = 0$; $x = 1$; $x = 2$ about the line $x = 4$.</p> <p style="text-align: center;">$\frac{67}{6}\pi$</p>	<p>6. Rotate the region bounded by $y = \sqrt{x - 1}$; $y = 0$; $x = 5$; about the line $y = 3$</p> <p style="text-align: center;">24π</p>
<p>7. Rotate the region bounded by $y = \frac{e^{0.5x}}{x+2}$; $y = 5 - \frac{x}{4}$; $x = -1$ and $x = 6$ about the line $x = -2$</p> <p style="text-align: center;">$2\pi \left(\frac{392}{3} + 2e^{-\frac{1}{2}} - 2e^3 \right)$</p>	