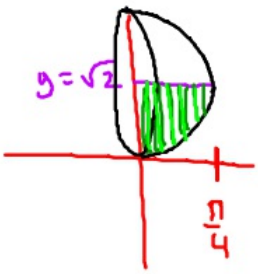
	Using geometry, find the volume of the solid generated by revolving the region bounded by the curve $x = \frac{3y}{2}$ and the y-axis about the y-axis from $0 \le y \le 2$. Using calculus, find the volume of the solid generated by revolving the region bounded by the curve $x = \frac{3y}{2}$ and the y-axis about the y-axis from $0 \le y \le 2$. 10. Find the volume of the solid generated by revolving the region bounded by the curve **y = sinxcosx** and the x-axis about the x-axis from $0 \le x \le \pi$.

	20. Find the volume of the solid generated by revolving the region bounded by the curve $y = -\sqrt{x}$ and the lines x = 0 and y = -2 about the y-axis. 20. Find the volume of the solid generated by revolving the region bounded by the curve $y = -\sqrt{x}$ and the lines x = 0 and y = -2 about the x-axis.

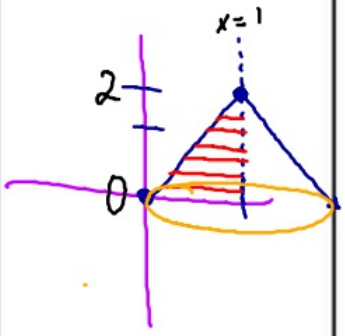
21. Find the volume of the solid generated by revolving the region in the first quadrant bounded above by the line $y=\sqrt{2}$, below by the curve **y = secxtanx,** and on the left by the y -axis, about the line $y=\sqrt{2}$.



$$V = \pi \int_0^{\pi/4} \left(\sqrt{2} - \underbrace{secxtanx}_{\text{radius}}\right)^2$$

30a. Find the volume of the solid generated by revolving the triangular region bounded by the lines $y = 2x$, $y = 0$ about the line $x = 1$.

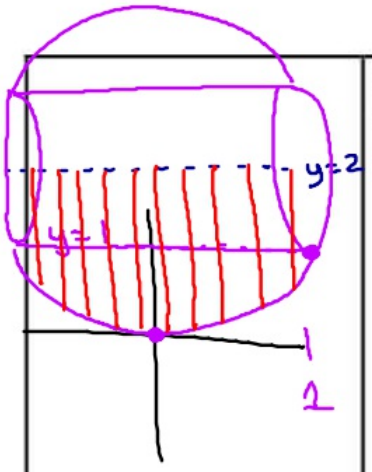
$x = \frac{y}{2}$



$$V = \pi \int_0^2 \left(1 - \frac{y}{2}\right)^2 dy$$

$$\pi \int_0^2 \left(1 - \frac{y}{2}\right)\left(1 - \frac{y}{2}\right) dy$$

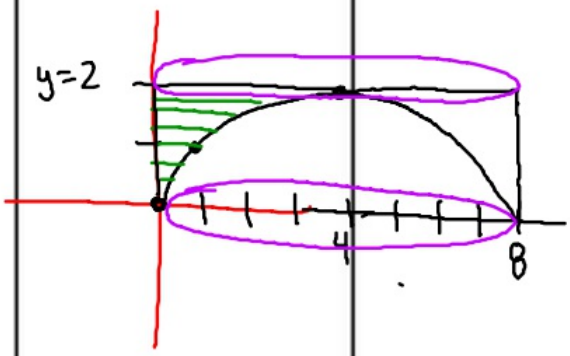
$$\pi \int_0^2 1 - \frac{y}{2} - \frac{y}{2} + \frac{y^2}{4} = \pi \int_0^2 1 - y + \frac{1}{4}y^2$$

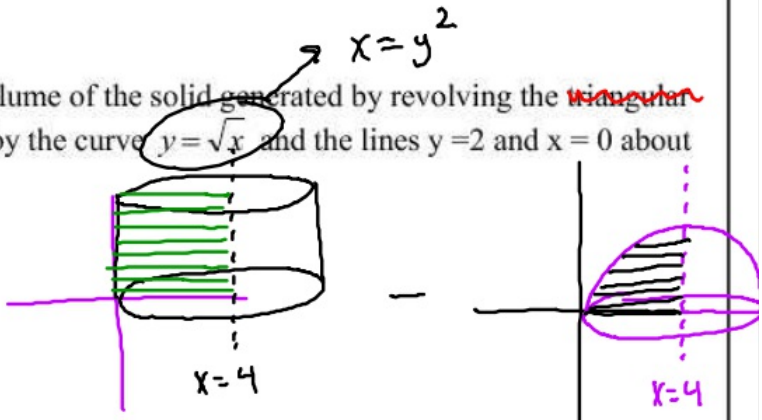


31b. Find the volume of the solid generated by revolving the ~~triangular~~ region bounded by the curve $y = x^2$ and the line y =1 about the line y = 2.

$$V = \pi \int_{-1}^{1} (2 - x^2)^2 dx \qquad V = \pi \int_{-1}^{1} (2-1)^2$$

29d. Find the volume of the solid generated by revolving the ~~triangular~~ region bounded by the curve $y = \sqrt{x}$ and the lines y =2 and x = 0 about the line x = 4.





$$V = \pi \int_{0}^{2} (4-0)^2 dy \qquad V = \pi \int_{0}^{2} (4-y^2)^2$$