Find the volume of the solid generated when the region between the graphs of the equations are revolved about the $y$-axis.
1.) $y=\sqrt{x}, x=1$ and the $x$-axis
2.) $y=x^{3}, x=1$ and $y=0$
3.) $y=\frac{1}{x^{\prime}} y=0, x=1$ and $x=3$
4.) $y=x^{2}, y=4$ and $x=0$
5.) $y=4-x^{2}$ and $y=0$

