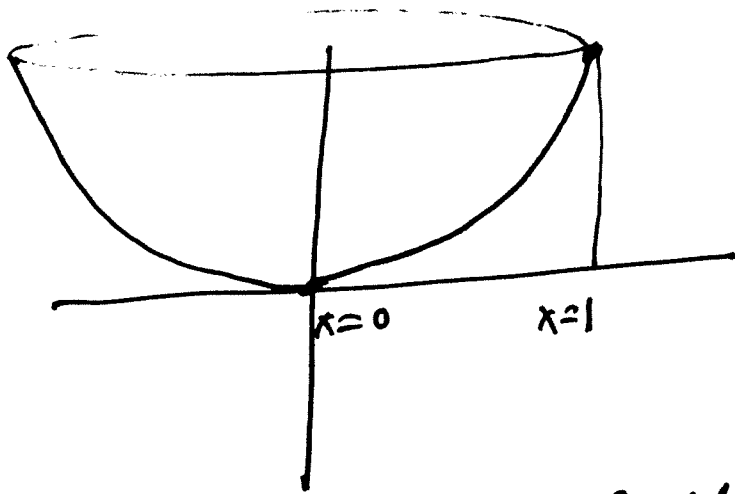


Midterm I

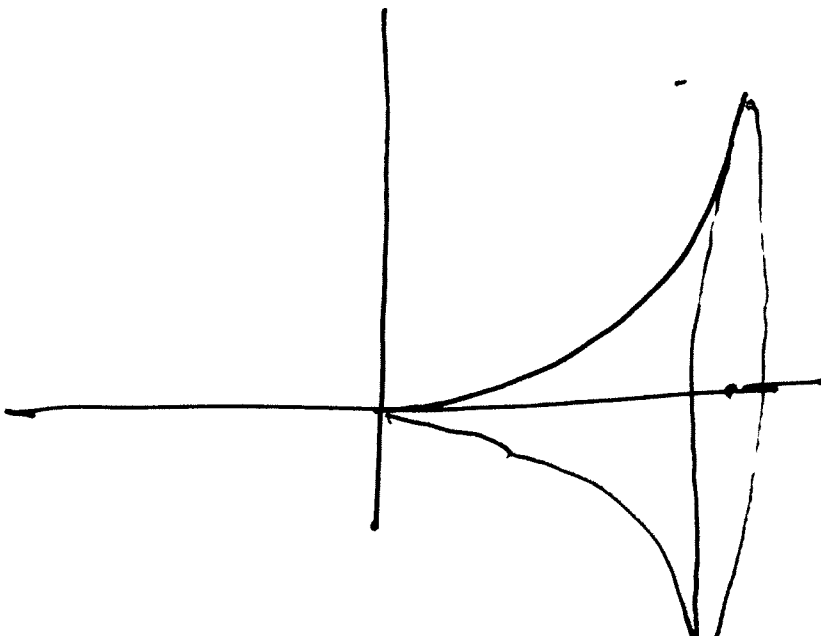
(Make up)

- ① The curve $y = x^3$ for $1 \geq x \geq 0$ is rotated about the y -axis



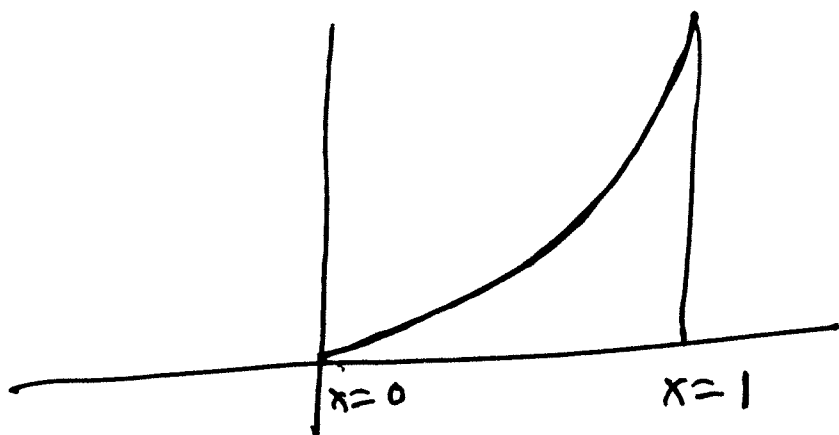
calculate volume of the object generated

- ② The curve $y = x^3$ for $1 \geq x \geq 0$ is rotated about the x -axis.



calculate the surface area of the object generated.

③ calculate length of the curve
 $y = x^3$ for $1 \geq x \geq 0$.



"you can leave the answer in an integral form but if you can solve the integral, do it."