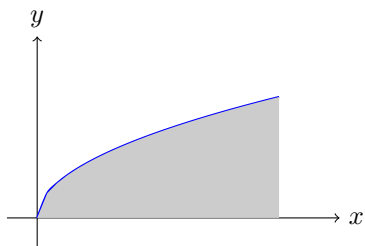


Practice: Volumes of Solids of Revolution

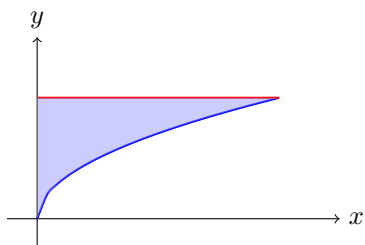
Instructions:

Set up the integral for the volume of revolution (set up only). Use the method you think is most appropriate (disks, washers or shells).

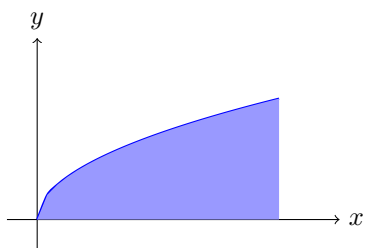
1. Region under $y = \sqrt{x}$ from $x = 0$ to $x = 4$, revolved about the x -axis.



2. Region between $y = \sqrt{x}$ and $y = 2$, from $x = 0$ to $x = 4$, revolved about the x -axis.

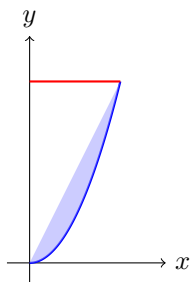


3. Region under $y = \sqrt{x}$, from $x = 0$ to $x = 4$, revolved about the y -axis.

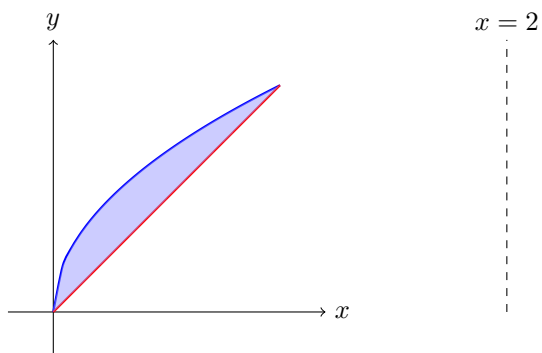


4. Region bounded by $y = x^2$ and $y = 4$, revolved about:

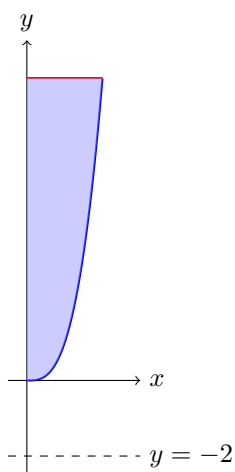
- (a) the x -axis.
- (b) the y -axis.



5. Region between $y = x$ and $y = \sqrt{x}$ on $[0, 1]$, revolved about the vertical line $x = 2$ (use shells).



6. Region bounded by $y = x^3$ and $y = 8$, $x \geq 0$, revolved about the horizontal line $y = -2$.



7. Region between $y = \sin x$ and $y = \cos x$ on $[0, \pi/4]$, revolved about the x -axis.

