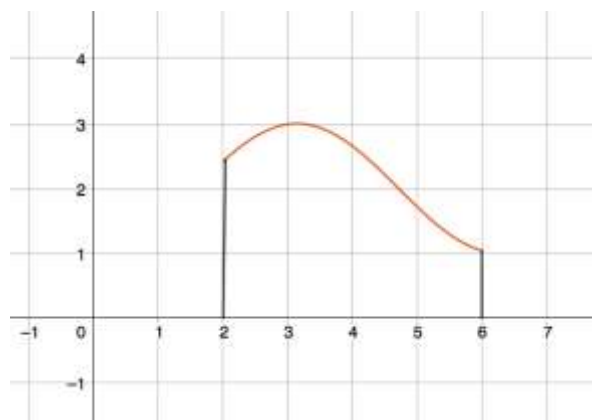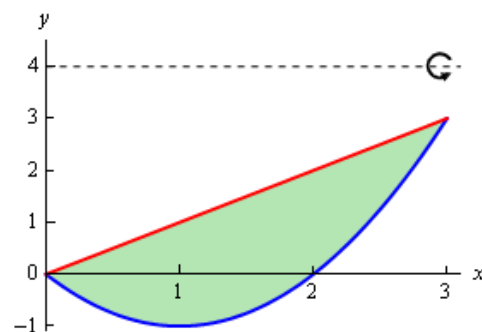1. Find the volume of the solid generated by revolving the region bounded by $f(x) = 2 - \cos x$ and the vertical lines $x = 2$ and $x = 6$ about the x-axis. Show all work.
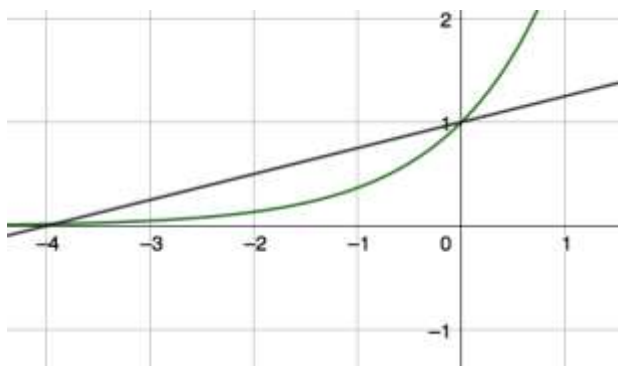

2. Set-up a single integral to calculate the volume of the solid generated when the region bounded by $f(x) = x^2 - 2x$ and $g(x) = x$ is revolved around the axis $y = 4$. Then use a calculator to find that volume.

I-A5b

3. Let R be the region bounded by $g(x) = e^x$ and $h(x) = \frac{1}{4}x + 1$. Find the volume of the solid formed by revolving R about the vertical line $x = 1$. (Calc ok)
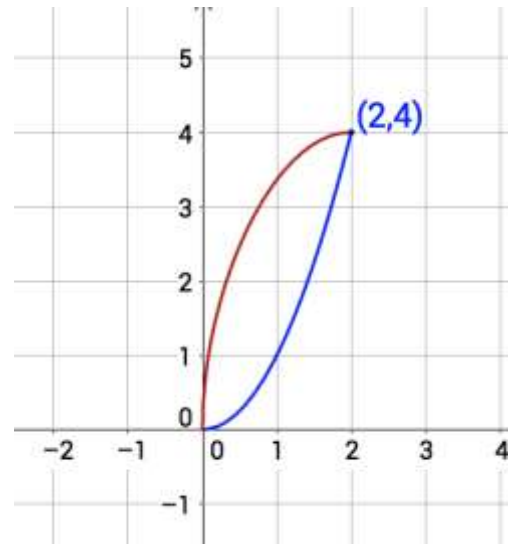
I-A5c

Let R be the first-quadrant region enclosed by

$f(x) = 4\sqrt{\sin(\frac{\pi x}{4})}$ and $g(x) = x^2$.

4. Let R be the base of a solid whose cross-sections perpendicular to the x-axis are semicircles. Find the volume of this solid. (Calc ok)

(2,4)

5. Let R be the base of a solid whose cross-sections perpendicular to the x-axis are rectangles with height three times as long as the base. Find the volume of this solid. (Calc ok)