

Show all work. 5 points each.

1) Sketch the region enclosed by the curves $y = 12 - x^2$ and $y = x^2 - 6$. Then find the area of the region.

2) Find the volume of the solid obtained by rotating the region bounded by the curves: $y = \frac{1}{x}$, $x = 1$, $x = 2$ and $y = 0$; about the x -axis.