$\begin{array}{c} {\rm MA114~Summer~2018}\\ {\rm Worksheet~18-Volumes~II-7/16/18} \end{array}$

1. Use the method of disks/washers to find the volume of the solid of revolution generated by rotating the region bounded by $y = 1 - x^2$ and y = 0 about the line y = -1.

2. Use the method of cylindrical shells to find the volume of the solid of revolution generated by rotating the region bounded by $y = x^2$, $y = 8 - x^2$, and x = 0 for $x \ge 0$ around the y-axis.

- 3. Find an integral expression for the volume of the solid generated by rotating the given region R about the specified axis using any method.
 - a) R is the region bounded by $y = -x^2 + 6x 8$, y = 0 about the y-axis.

b) R is the region bounded by $y = -x^2 + 6x - 8$, y = 0 about the x-axis.

c) R is the region bounded by $x = (y - 3)^2, x = 4$, about y = 1.

d) R is the region bounded by $x = (y - 1)^2, x - y = 1$, about x = -1.