Homework 13

1. Section 6.4: problem 13, 19, 23.
2. Section 6.4: Compute the surface of the donut obtained by rotating $\mathcal{C} = \{(x-R)^2+y^2 = r^2\}$, $R > r$, around the y-axis by expressing $\mathcal{C}$ as
   (a) $x = R \pm \sqrt{r^2 - y^2}$ (i.e. $S = \int_?^? ?dy$), and
   (b) $x = R + r\cos t$, $y = r\sin t$ (i.e. $S = \int_?^? ?dt$), respectively.
3. Section 7.2: problems 9, 13, 17, 21.
4. Section 9.2: problems 3, 9, 19.