WRITE YOUR NAME:

MAC 2312 WRITTEN HOMEWORK #3
Due Tuesday January 30th, in Canvas

Question 1. Find the area bounded by the graphs of $y = x^2$ and $y = \sqrt{x}$.

Question 2. Let R be the region bounded by the curves $y = \sin x$ and $y = \cos x$ on the interval $[\pi/4, 5\pi/4]$. Find the area of R.

Question 3. Find the area bounded by the graphs of $x = y^2 - 3y + 12$ and $x = -2y^2 - 6y + 30$.

Question 4. Let A be the region bounded by the curves $y = \sin x$ and $y = 1 - \sin x$ on the interval $[\pi/6, 5\pi/6]$. Find the volume obtained when A is revolved around the line $y = -1$.