Problem 1

Find the area bounded by the functions $x = y^2$ and $x = 4$.

Problem 2

Find the area of the region bounded by $x = y^2 - 2$ and $x = 2y + 6$.

Problem 3

Rotate the region bounded by $y = \sqrt{x}$, $y = 0$ and $x = 1$ about the x-axis and find the volume of the resulting solid.

Problem 4

Rotate the region bounded by $y = x^2$ and $y = x$ about the x-axis.

Problem 5

Rotate the function $y = \sqrt{36 - x^2}$ about the x-axis. Find the volume of the resulting solid (and use geometry to check your answer)!