6.5 – Volumes of Solids of Revolution, Part II

1. Consider the region R bounded by the curves $y = \ln x$, $y = -2$, and $x = 3$.

   a. Find the volume of the solid formed when R is revolved about the line $y = -2$.

   b. Find the volume of the solid formed when R is revolved about the line $x = 5$.

2. Consider the region *D* bounded by the curves $x = y^2$ and $x = 2y$.

   a. Find the volume of the solid formed when *D* is revolved about the line $x = -1$.

   b. Find the volume of the solid formed when *D* is revolved about the line $y = 4$.

3. Consider the region Γ bounded by the curves $y = e^{-2x}$ and $y = 2 - x^2$.

   a. Find the volume of the solid formed when Γ is revolved about the line $y = 3$.

   b. Find the volume of the solid formed when Γ is revolved about the line $x = -3$.