

Worksheet

1. Find the area of the region between the curves $y = x^2 - 2$ and $y = -x$.
2. For each b with $1 \leq b \leq 4$ construct the triangle perpendicular to the x - y plane and with one edge the segment perpendicular to the y -axis at the point $(0, b)$ and with its endpoints on the curve $y = x^2 - 2$. Find the volume enclosed by these triangles and the planes $y = 1$ and $y = 4$.