AP Calculus BC
Lesson 9.2 Surface Area

9.2(1)

The curve $y = \sqrt{a^2 - x^2}$ is revolved about the x-axis. Find the area of the surface obtained.

9.2(2)

The curve $y = \sqrt{4 - x^2}$, $-1 \le x \le 1$, is revolved about the x-axis. Find the area of the surface obtained.

9.2(3)

The arc of the parabola $y = x^2$ from (1,1) to (2,4) is revolved about the y-axis. Find the area of the resulting surface.

9.2(4)

Find the surface area of the "spool" obtained by revolving around the $y-$axis the region bounded by the graph of $y^2 - x + 1 = 0$ and the y-axis for $-1 \le y \le 1$.