Q1

15–20 Use the method of cylindrical shells to find the volume generated by rotating the region bounded by the given curves about the specified axis.

19. $x = 2y^2$, $y \geq 0$, $x = 2$; about $y = 2$

Q2 Evaluate $\int_{\sqrt{\pi/2}}^{\sqrt{\pi}} x^3 \cos(x^2) dx$