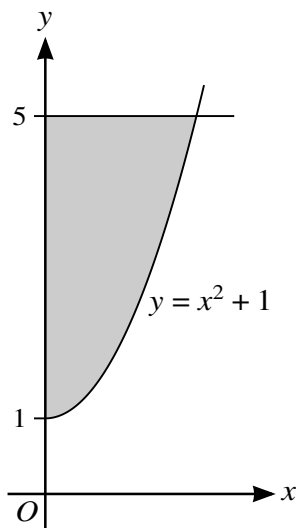**3**

The diagram shows part of the curve with equation $y = x^2 + 1$. The shaded region enclosed by the curve, the y-axis and the line $y = 5$ is rotated through $360°$ about the **y-axis**.

Find the volume obtained. [4]

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