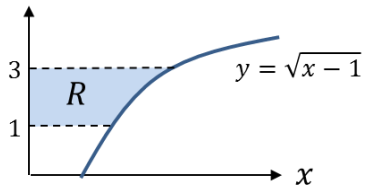
Revolving around the y-axis

Examples

1. R is the area enclosed by the curve with equation $y = \sqrt{x^2 + 5}$, the y-axis and the lines $y = 3$ and $y = 6$. The region is rotated through $360°$ about the y-axis. Find the volume of the solid generated.

2. The diagram shows the curve with equation $y = \sqrt{x-1}$. The region R is bounded by the curve, the y-axis and the lines $y = 1$ and $y = 3$. The region is rotated through $360°$ about the y-axis. Find the volume of the solid generated.



<u>Test your Understanding</u>

A curve has equation $y = \sqrt[3]{2x+1}$. The region R is bounded by the curve, the y-axis and the lines $y = 2$ and $y = 4$. The region is rotated through $360°$ about the y-axis. Find the volume of the solid generated.

Ex 5b Pg 77-78