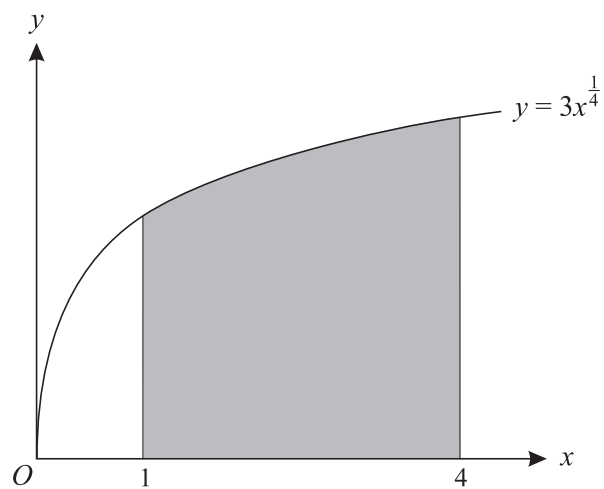


2



The diagram shows the curve  $y = 3x^{\frac{1}{4}}$ . The shaded region is bounded by the curve, the  $x$ -axis and the lines  $x = 1$  and  $x = 4$ . Find the volume of the solid obtained when this shaded region is rotated completely about the  $x$ -axis, giving your answer in terms of  $\pi$ . [4]