



The diagram shows part of the curve $y = 2(3x - 1)^{-\frac{1}{3}}$ and the lines $x = \frac{2}{3}$ and $x = 3$. The curve and the line $x = \frac{2}{3}$ intersect at the point A.

- (i) Find, showing all necessary working, the volume obtained when the shaded region is rotated through 360° about the x -axis. [5]

This image shows a full page of white paper with horizontal dashed lines, typical of primary-ruled notebook paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings present.

- (ii)** Find the equation of the normal to the curve at A , giving your answer in the form $y = mx + c$.

[5]

[illegible]