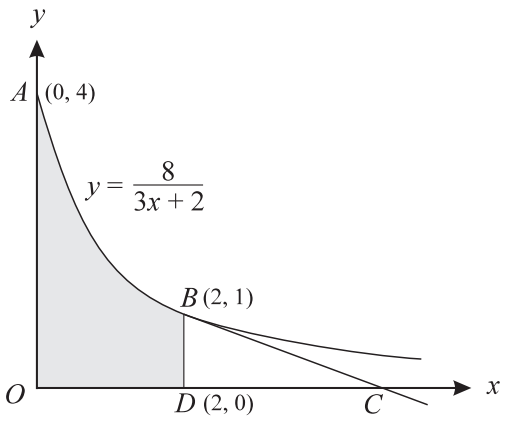
9



The diagram shows points A (0, 4) and B (2, 1) on the curve $y = \frac{8}{3x+2}$. The tangent to the curve at B crosses the x-axis at C. The point D has coordinates (2, 0).

(i) Find the equation of the tangent to the curve at B and hence show that the area of triangle BDC is $\frac{4}{3}$. [6]

(ii) Show that the volume of the solid formed when the shaded region $ODBA$ is rotated completely about the x-axis is 8π. [5]