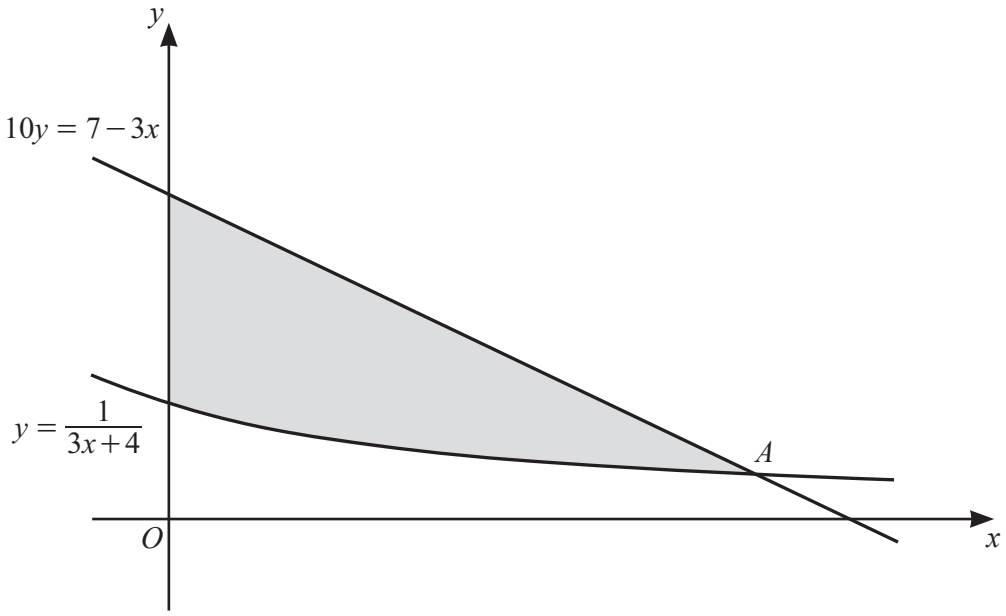
9 **(a)** Show that $\int_1^8 \frac{x+4}{\sqrt[3]{x}}\mathrm{d}x = 36.6$. [3]

(b)



The diagram shows part of the line $10y = 7 - 3x$ and part of the curve $y = \frac{1}{3x+4}$.

The line and curve intersect at the point A. Verify that the y-coordinate of A is 0.1 and calculate the area of the shaded region. [8]

© UCLES 2023

Continuation of working space for Question 9(b).