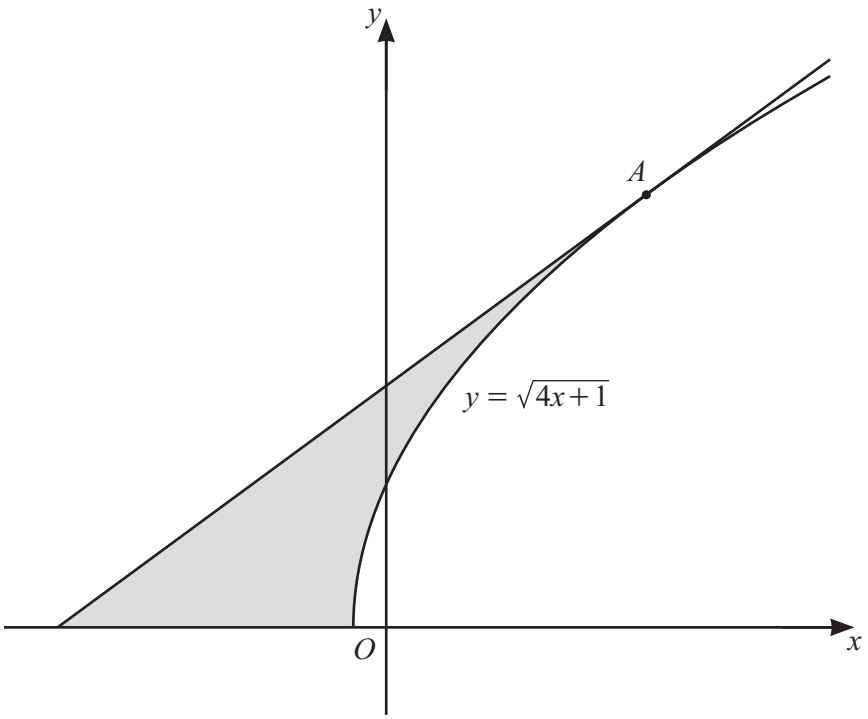
8 **(a)** Write down the set of values of x for which $\log_5(12x-4)$ exists. [1]

(b) Solve the equation $\log_5(12x-4) = \frac{6}{\log_x 125} + 1$. [6]

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9



The point A with x-coordinate 2 lies on the curve $y = \sqrt{4x+1}$.
The diagram shows part of this curve and the tangent to the curve at A.

Find the area of the shaded region enclosed by the curve, the tangent and the x-axis. [10]

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