The diagram shows the curve with equation $y = \log_3 x$.
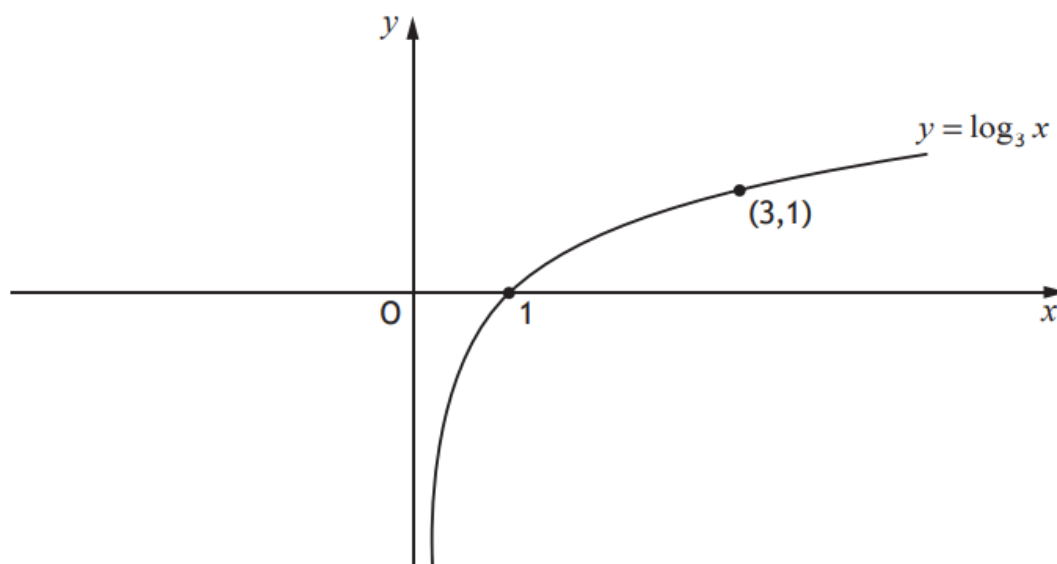
(a) On the diagram in your answer booklet, sketch the curve with equation $y = 1 - \log_3 x$. 2

(b) Determine the exact value of the x-coordinate of the point of intersection of the two curves. 3

Answers:

(a) Curve reflected in x-axis and translated 1 unit vertically upwards.

(b) $\sqrt{3}$ or $3^{\frac{1}{2}}$