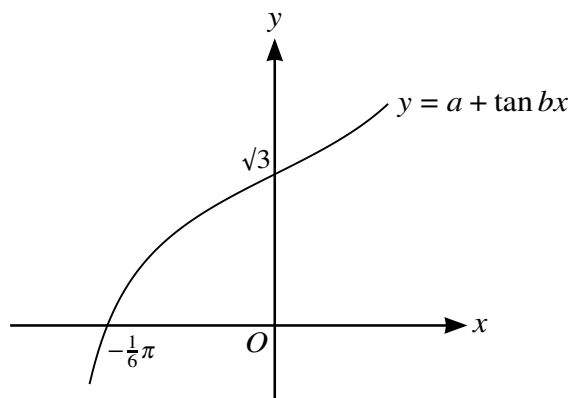


(a) Solve the equation $3 \sin^2 2\theta + 8 \cos 2\theta = 0$ for $0^\circ \leq \theta \leq 180^\circ$.

[5]

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

(b)



The diagram shows part of the graph of $y = a + \tan bx$, where x is measured in radians and a and b are constants. The curve intersects the x -axis at $(-\frac{1}{6}\pi, 0)$ and the y -axis at $(0, \sqrt{3})$. Find the values of a and b . [3]

[illegible]