

5 (a) Show that $\tan^4 \theta - 1 \equiv \frac{1 - 2 \cos \theta}{\cos^4 \theta}$.

[3]

[illegible]

(b) Hence solve the equation $\cos^2\theta(\tan^4\theta - 1) = 7$ for $0^\circ < \theta < 180^\circ$. [4]

This image shows a full page of white paper with horizontal dashed lines, typical of primary-ruled notebook 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.