5 **(a)** Show that $\frac{\cos x}{1-\sin x}+\frac{1-\sin x}{\cos x}=2\sec x$. [4]

(b) Hence solve the equation $\frac{\cos\frac{\theta}{2}}{1-\sin\frac{\theta}{2}}+\frac{1-\sin\frac{\theta}{2}}{\cos\frac{\theta}{2}}=8\cos^2\frac{\theta}{2}$ for $-360° < \theta < 360°$. [4]

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