6 **(a)** Show that $\dfrac{\cot\theta + \tan\theta}{\sec\theta} = \operatorname{cosec}\theta$. [4]

(b) Hence solve the equation $\left(\dfrac{\cot\frac{\phi}{3}+\tan\frac{\phi}{3}}{\sec\frac{\phi}{3}}\right)^2 = 2$, for $-540° < \phi < 540°$. [6]