

- 5** (i) Show that the equation $1 + \sin x \tan x = 5 \cos x$ can be expressed as

$$6 \cos^2 x - \cos x - 1 = 0. \quad [3]$$

- (ii) Hence solve the equation $1 + \sin x \tan x = 5 \cos x$ for $0^\circ \leq x \leq 180^\circ$. [3]