

- 2** **(i)** Express the equation $\sin 2x + 3 \cos 2x = 3(\sin 2x - \cos 2x)$ in the form $\tan 2x = k$, where k is a constant. [2]
- (ii)** Hence solve the equation for $-90^\circ \leq x \leq 90^\circ$. [3]