7 **(a)** Express $4\cos\theta\sin(\theta+30°)$ in the form $R\cos(2\theta-\alpha)+k$, where $R>0$, $0°<\alpha<90°$ and k is a constant. [6]

(b) Hence solve the equation

$$12\cos 2\phi\sin(2\phi+30°)=5$$

for $0°<\phi<90°$. [5]

Additional page

If you use the following page to complete the answer to any question, the question number must be clearly shown.