(a) Solve the equation $\sin 2 x^{\circ}+6 \cos x^{\circ}=0$ for $0 \leq x<360$.
(b) Hence solve $\sin 4 x^{\circ}+6 \cos 2 x^{\circ}=0$ for $0 \leq x<360$.

Answers:
(a) $x=90,270$
(b) $\quad x=45,135,225,315$

