

9. (a) Express $7 \cos x^\circ - 3 \sin x^\circ$ in the form $k \sin(x + a)^\circ$ where $k > 0$, $0 < a < 360$.

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(b) Hence, or otherwise, find:

(i) the maximum value of $14 \cos x^\circ - 6 \sin x^\circ$

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(ii) the value of x for which it occurs where $0 \leq x < 360$.

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