

Higher Maths
SQA 2019 Paper 2
Question 6



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- (a) Express $2 \cos x^\circ - 3 \sin x^\circ$ in the form $k \cos(x+a)^\circ$ where $k > 0$ and $0 \leq a < 360$. 4
- (b) Hence solve $2 \cos x^\circ - 3 \sin x^\circ = 3$ for $0 \leq x < 360$. 3
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Answers:

- (a) $\sqrt{13} \cos(x + 56.3\dots)^\circ$
- (b) $x = 337.4$ or $x = 270$