



2019 P2 Q6

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

Answers

(a) $\sqrt{13} \cos(x + 56.3)^\circ$

(b) $x = 270^\circ, 337.38 \dots^\circ$