12 **(a)** Solve the equation $2\operatorname{cosec}^2\theta - 5 = 5\cot\theta$ for $-180° \leqslant \theta \leqslant 180°$. [7]

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(b) Solve the equation $3\sin(2\phi + 1.5) = 2$ for $0 < \phi < 5$, where ϕ is in radians. [5]

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