## Solving Quadratic Trigonometric Equations

Question	Factorise and Solve	Solve 1 <sup>st</sup> Trig Equation	Solve 2 <sup>nd</sup> Trig Equation
Solve $\tan^2\theta - \tan\theta - 6 = 0$ for $0^\circ \le \theta < 360^\circ$	$(\tan \theta - 3)(\tan \theta + 2) = 0$ $\tan \theta = 3$ or $\tan \theta = -2$	$\theta = \tan^{-1}(3)$ $\theta = 71.6^{\circ}$ $\theta = 71.6^{\circ}, 251.6^{\circ}$	$\theta = \tan^{-1}(2)$ $\theta = 63.4^{\circ}$ $\theta = 116.6^{\circ}, 296.6^{\circ}$
Solve $6 \sin^2 \theta - \sin \theta - 1 = 0$ for $-180^\circ \le \theta < 180^\circ$			
Solve $2\cos^{2}\theta + 7\cos\theta + 3 = 0$ for $0^{\circ} \le \theta < 360^{\circ}$			
Solve $3 \tan^2 \theta - 8 \tan \theta + 4 = 0$ for $-180^\circ \le \theta < 180^\circ$			
Solve $9 \sin^2 \theta - 1 = 0$ for $0^\circ \le \theta < 360^\circ$			