YEAR 13 A LEVEL MATHS HOMEWORK 6 DUE DATE: _____

ANSWER ALL QUESTIONS, MAKE SURE YOU SHOW ALL WORKING OTHERWISE YOU WILL NOT BE AWARDED MARKS. IF YOU WRITE ON ANY OTHER PAPER, PLEASE HAND THIS IN WITH THE SHEET.

NAME: _____

Q1. Solve, for 0 <i>θ</i> 180°,	Q2. (a) Express $4\csc^2 2\theta - \csc^2 \theta$ in terms of sin θ and $\cos \theta$. (2)	Q3.(a) Given that $\sin^2\theta + \cos^2\theta \equiv 1$, show that $1 + \cot^2\theta \equiv \csc^2\theta$.(2)
$2\cot^2 3\theta = 7 \csc 3\theta - 5$	(b) Hence show that	(b) Solve, for $0 \le \theta \le 180^\circ$, the equation
Give your answers in degrees to 1 decimal place. (10)	$4\csc^2 2\theta - \csc^2 \theta = \sec^2 \theta (4)$	$2 \cot^2 \theta - 9 \operatorname{cosec} \theta = 3,$
(Total 10 marks)	(c) Hence or otherwise solve, for $0 < \theta < \pi$,	giving your answers to 1 decimal place. (6)
	$4 \operatorname{cosec}^2 2\theta - \operatorname{cosec}^2 \theta = 4$	(Total 8 marks)
	giving your answers in terms of π . (3)	
	(Total 9 marks)	

YEAR 13 A LEVEL MATHS HOMEWORK 6 ANSWERS

