	Mathsgenie.co.uk	Please do not write on this sheet			Mathsgenie.co.uk	
1	<ul> <li>(a) Write x<sup>2</sup> - 6x + 1 in the form (x + a)<sup>2</sup> +</li> <li>(b) Hence, or otherwise, write down the co of the graph of y = x<sup>2</sup> - 6x + 1</li> </ul>	2	(2) (1) (3 marks)	<ul> <li>5 By completing the square, find the coordinates of curve with the equation y = x<sup>2</sup> + 8x + 3</li> <li>You must show all your working.</li> <li>6 By completing the square, find the coordinates of</li> </ul>		(3 marks)
2	<ul> <li>(a) Write x<sup>2</sup> + 8x + 5 in the form (x + a)<sup>2</sup> +</li> <li>(b) Hence, or otherwise, write down the compoint of the graph of y = x<sup>2</sup> + 8x + 5</li> </ul>		(2) (1) <b>(3 marks)</b>	<ul> <li>curve with the equation y = x<sup>2</sup> + 10x - 8</li> <li>You must show all your working.</li> <li>7 By completing the square, find the coordinates of curve with the equation y = x<sup>2</sup> + 3x - 7</li> <li>You must show all your working.</li> </ul>	the turning point of the	(3 marks) (3 marks)
3	<ul> <li>(a) Write x<sup>2</sup> + 10x + 2 in the form (x + a)<sup>2</sup></li> <li>(b) Hence, or otherwise, write down the copoint of the graph of y = x<sup>2</sup> + 10x + 2</li> </ul>	_	(2) (1) (3 marks)	<ul> <li>8 By completing the square, find the coordinates of curve with the equation y = x<sup>2</sup> - x + 8</li> <li>You must show all your working.</li> </ul>	the turning point of the	(3 marks)
4	<ul> <li>(a) Write x<sup>2</sup> - 2x - 1 in the form (x + a)<sup>2</sup> + b where a and b are integers.</li> <li>(b) Hence, or otherwise, write down the coordinates of the turning point of the graph of y = x<sup>2</sup> - 2x - 1</li> </ul>		(2) (1) (3 marks)	<ul> <li>9 (a) Write 2x<sup>2</sup> - 12x + 23 in the form a(x + b)<sup>2</sup> + c where a, b, and c are integers.</li> <li>(b) Hence, or otherwise, write down the coordinates of the turning point of the graph of y = 2x<sup>2</sup> - 12x + 23</li> </ul>		(3) (1) (4 marks)
	Grade 9 Completing the Square					

Mathsgenie.co.uk	Please d	o not write on this sheet	Mathsgenie.co.uk		
<ul> <li>10 (a) Write 2x<sup>2</sup> + 16x + 26 in the form a(x - (b) Hence, or otherwise, write down the of the graph of y = 2x<sup>2</sup> + 16x + 26</li> </ul>		(3) (1) (4 marks)			
<ul> <li>(a) Write 3x<sup>2</sup> - 6x + 6 in the form a(x + b)</li> <li>(b) Hence, or otherwise, write down the of the graph of y = 3x<sup>2</sup> - 6x + 6</li> </ul>		(3) (1) (4 marks)			
<ul> <li>(a) Write 3x<sup>2</sup> - 30x + 63 in the form a(x - (b) Hence, or otherwise, write down th point of the graph of y = 3x<sup>2</sup> - 30x</li> </ul>	ne coordinates of the turning	(3) (1) (4 marks)			
<b>13</b> By completing the square, solve $x^2 + 10x$	-3 = 0 Give your answers in surd form.	(5 marks)			
<b>14</b> By completing the square, solve $x^2 + 5x + 4.25 = 0$ Give your answers in surd form.		(5 marks)			
Grade 9	Completing the Square				