

Q	Marking instructions	AO	Marks	Typical solution
6(a)	Squares a number with two or more digits and adds its digits. Must be explicit	1.1a	M1	$12^2 = 144$ $1 + 2 = 3$ $3 \neq 4$
	Completes argument to show that Asif's method is incorrect. Must compare sum of digits with last digit of square number	2.3	R1	
Subtotal			2	

Q	Marking instructions	AO	Marks	Typical solution
6(b)	Obtains 1	1.1b	B1	1
Subtotal			1	

Q	Marking instructions	AO	Marks	Typical solution												
6(c)	Lists at least four single digits and their squares Or Explains why odd digits do not need to be considered	1.1a	M1	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>$0^2 = 0$</td> <td>$4^2 = 16$</td> <td>$8^2 = 64$</td> </tr> <tr> <td>$1^2 = 1$</td> <td>$5^2 = 25$</td> <td>$9^2 = 81$</td> </tr> <tr> <td>$2^2 = 4$</td> <td>$6^2 = 36$</td> <td></td> </tr> <tr> <td>$3^2 = 9$</td> <td>$7^2 = 49$</td> <td></td> </tr> </table>	$0^2 = 0$	$4^2 = 16$	$8^2 = 64$	$1^2 = 1$	$5^2 = 25$	$9^2 = 81$	$2^2 = 4$	$6^2 = 36$		$3^2 = 9$	$7^2 = 49$	
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Completes rigorous argument to prove that no square number has a last digit of 8 OE CSO	2.1	R1	Therefore, there can be no square number which has a last digit of 8													
Subtotal			2													

Question 6 Total			5	
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