

# Topic Test 1 Mark Scheme

## Indices - Higher

Q	Answer	Mark	Comments
1(a)	0.2	B1	oe
1(b)	4.5	B1	
2	14 or $2^{14}$	B1	
3	4	B1	
4	12	B1	
5	$11^2 + 14^2 = 317$ or $12^2 + 15^2 = 369$ $13^2 + 16^2 = 425$	M1	
	12 and 15	A1	
6(a)	$11^6$	B1	Accept 6
6(b)	$2^{30}$	B1	Accept 30
7	$216 + 8$	B1	
8	[9.2, 9.5]	B1	
9	4 and 5	B1	
10	$10^4$	B1	

Q	Answer	Mark	Comments
11	7	B1	
	-7	B1	
12	Yes ticked and $\text{odd} \times \text{odd} = \text{odd}$ $\text{even} \times \text{even} = \text{even}$ $\text{odd} - \text{even} = \text{odd}$ and $\text{even} - \text{odd} = \text{odd}$	B2	B1 for Yes ticked and 2 examples shown to be true or B1 for Yes ticked and partial explanation
13	[2.8, 2.95]	B1	
14	Two of $a = 2, b = 6$ $a = 8, b = 2$ $a = 4, b = 3$	B2	B1 any one correct