N105 Indices 1	
Q1.	
Work out the value of 3 ⁵	
	(Total for question = 1 mark)
Q2.	
(a) Write $\frac{3^5 \times 3^4}{3^2}$ as a power of 3	
	(2)
(b) Write down the value of 12 ⁰	
(c) Write down the value of 3 ⁻²	(1)
	(1)

(Total for question = 4 marks)

Q3.					
Write these numbers in o					
	5-1	0.5	-5	50	
				(Total for Qu	estion is 2 marks)
Q4.					
(a) Simplify $5^4 \times 5^6$					
					(1)
(b) Simplify $7^5 \div 7^2$					
					(1)
				(Total for Que	estion is 2 marks)

Q5.	
(a) Simplify $a^4 \times a^3$	
(b) Simplify $(b^2)^7$	(1)
	(1)
(c) Write down the value of 3 ⁰	
(d) Write down the value of 4 ⁻¹	(1)
	(1)
	(Total for question = 4 marks)

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n^3	~	$p^{x} =$	n 9
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(a) Find the value of x.

<i>x</i> =	 	 	 	 	 	 		
							(1	١

$$(7^2)^y = 7^{10}$$

(b) Find the value of *y*.

<i>y</i> =	 	 	 	
			(1	ı

 $100^a \times 1000^b$ can be written in the form 10^w

(c) Show that w = 2a + 3b

(2)

(Total for question = 4 marks)

Q7. $\frac{x^9}{}$	
(a) Simplify $\frac{x^9}{x^2}$	
(b) Write $\frac{7^8 \times 7^4}{7^3}$ as a single power of 7	(1
	(2
Q8.	(Total for question = 3 marks
$\frac{8}{2^7} = 2^n$ (a) Find the value of n .	
	n =
$(13^{-6})^4 \times 13^5 = 13^k$ (b) Find the value of k .	(2

(Total for question = 4 marks)

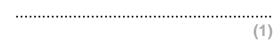
(2)

_	_
n	a
w	J.

(a) Write	$2^3 \times$	2 ⁶ a	as a	single	power	of 2

(1)

(b) Write $\frac{3^9}{3^4}$ as a single power of 3



(c) $\frac{5^n}{5^4 \times 5^6} = 5^3$. Find the value of n.

n =(2)

(Total for question = 4 marks)