

Question Number	Scheme	Marks
7(a)	$a^5 = 1024$	
	$a = \sqrt[5]{1024}, a = 4$	B1 (1)
(b)	$6c + 9 = 3^4 = 81, c = 12$	M1, A1 (2)
(c)	$4\log_b 5 + 6\log_b 5 = 5$	M1
	$\log_b 5 = \frac{1}{2}$	M1
	$5 = b^{\frac{1}{2}} \quad b = 25$	M1A1 (4)
(d)	$3\log_2 x + 4\log_3 y = 10, \quad 2\log_2 x - 4\log_3 y = 2$	
	$\Rightarrow 5\log_2 x = 12,$	M1A1
	$10\log_3 y = 7$	A1
	$x = 2^{2.4}, x = 5.28$	M1A1
	$y = 3^{0.7}, y = 2.16$	A1 (6)
		[13]