1(a)	$2^2 \times 3 \times 5 \times 7$ or $2 \times 2 \times 3 \times 5 \times 7$			**2**	**B1** for list 2, 2, 3, 5, 7 or **M1** for any two stages correct in factor tree or ladder method
1(b)	84			**1**	
2(a)	$2^3 \times 3^3$ or $2 \times 2 \times 2 \times 3 \times 3 \times 3$			**2**	**B1** for list 2, 2, 2, 3, 3, 3 or **M1** for any two stages correct in factor tree or ladder method
2(b)	54 and 72			**2**	**B1** for [18 =] $2 \times 3 \times 3$ soi or **M1** for listing two or more of 36, 54, 72, 108
3(a)	$2 \times 2 \times 3 \times 3 \times 3$ or $2^2 \times 3^3$			**2**	**B1** for 2, 2, 3, 3, 3 as factors or **M1** for any two stages correct in factor tree or ladder method
3(b)	540			**2**	**B1** for $2^2 \times 3^3 \times 5$ oe or **M1** for 2, 2, 3, 3, 5 identified as prime factors of 180 or for at least three multiples of 180 and 108 listed
4(a)	$2 \times 2 \times 2 \times 3 \times 7$ or $2^3 \times 3 \times 7$		**2**	**B1** for 2, 2, 2, 3, 7 as factors or **M1** for any two stages correct in factor tree or ladder method	
4(b)	210 **and** 294 only		**2**	**B1** for one correct value seen or for answers $2 \times 3 \times 5 \times 7$ and $2 \times 3 \times 7^2$	
5(a)(i)	2×3^3 or $2 \times 3 \times 3 \times 3$		**1**		
5(a)(ii)	4		**1**		
6 (a)	$2^5 \times 3$		1*		
(b)	72		1		
7 (a)	$2 \times 3^2 \times 11$ oe		1		
(b) (i)	12, or $2^2 \times 3$		1		
(ii)	90, or $2 \times 3^2 \times 5$		1		
8 (a)	$2^2 \times 3 \times 5$		1		
(b)	15		1		
(c)	9		1		

9	(a)	$2^2 \times 3^2 \times 5$ oe		**1**	
	(b)	11 www		**1**	

10	(a)	$2^2 \times 3^3$	1	
	(b)	($p =$) 3, ($q =$) 2, ($r =$) 1	2	C1 for two correct

11...	(a)	$2^2 \times 5 \times 7$	1	
	(b)	28	1	
	(c)	42	1	

12	(a)	1,2,3,6,9,18	1	Condone embellishments such as $2 \times 9 = 18$ etc. if all the correct factors seen. Missing factors or incorrect factors seen gets 0.
	(b)	$2^3 \times 7^2$	1	Accept other forms such as $2 \times 2 \times 7^2 \times 2$ but ignore = 392 Factor Tree not sufficient.

13	(a)	$2^2 \times 3^3$	1	Accept 2 x 2 etc. condone $x1^n$ throughout
	(b)	$2^3 \times 3^3 \times 5$	1*	Answer 1080 look back. Give mark if correct prime factors seen
	(c)	75 or 3×5^2	1	