

1(a)	$2^2 \times 3 \times 5 \times 7$ or $2 \times 2 \times 3 \times 5 \times 7$	2	<b>B1</b> for list 2, 2, 3, 5, 7 or <b>M1</b> 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	<b>B1</b> for list 2, 2, 2, 3, 3, 3 or <b>M1</b> for any two stages correct in factor tree or ladder method
2(b)	54 and 72	2	<b>B1</b> for $[18 =] 2 \times 3 \times 3$ soi or <b>M1</b> 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	<b>B1</b> for 2, 2, 3, 3, 3 as factors or <b>M1</b> for any two stages correct in factor tree or ladder method
3(b)	540	2	<b>B1</b> for $2^2 \times 3^3 \times 5$ oe or <b>M1</b> 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	<b>B1</b> for 2, 2, 2, 3, 7 as factors or <b>M1</b> for any two stages correct in factor tree or ladder method
4(b)	210 <b>and</b> 294 only	2	<b>B1</b> 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)	$2 \times 3^3$ 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	

<b>9</b>	<b>(a)</b> $2^2 \times 3^2 \times 5$ oe	<b>1</b>	
	<b>(b)</b> 11 www	<b>1</b>	
<b>10</b>	<b>(a)</b> $2^2 \times 3^3$	1	
	<b>(b)</b> ( $p =$ ) 3, ( $q =$ ) 2, ( $r =$ ) 1	2	C1 for two correct
<b>11</b>	<b>(a)</b> $2^2 \times 5 \times 7$	1	
	<b>(b)</b> 28	1	
	<b>(c)</b> 42	1	
<b>12</b>	<b>(a)</b> 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>(b)</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.
<b>13</b>	<b>(a)</b> $2^2 \times 3^3$	<b>1</b>	Accept $2 \times 2$ etc. condone $x1^n$ throughout
	<b>(b)</b> $2^3 \times 3^3 \times 5$	<b>1*</b>	Answer 1080 look back. Give mark if correct prime factors seen
	<b>(c)</b> 75 or $3 \times 5^2$	<b>1</b>	