Paper: 1MA	1/1F			
Question	Working	Answer	Mark	Notes
²² Q1		2×2×2×7	M1 A1	for complete method to find prime factors; could be shown on a complete factor tree with no more than 1 arithmetic error accept $2^3 \times 7$

Paper: 1MA1/1F							
Question	Answer	Mark	Mark scheme	Additional guidance			
24 Q2	18	M1 A1	for listing factors of 72 and 90, at least 4 correct for each (with no more than 1 incorrect in each list), could be in factor pairs OR for the prime factors of 72 (2, 2, 2, 3, 3) or 90 (2, 3, 3, 5) for 18 or 2×3^2 oe SC B1 for answer of 6 or 9 if M0 scored	Factors of 72: 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72 Factors of 90: 1, 2, 3, 5, 6, 9, 10, 15, 18, 30, 45, 90 2, 3 ² is not enough, it must be a product			

Paper: 1MA1	Paper: 1MA1/2F							
Question	Answer	Mark	Mark scheme	Additional guidance				
21 (a)	2×2×3×7	M1	for a complete method to find prime factors, could be shown on a factor tree, with no more than one arithmetic error or for 2, 2, 3, 7	Condone the use of 1				
Q3		A1	for $2 \times 2 \times 3 \times 7$ oe	Accept $2^2 \times 3 \times 7$				
(b) 420 M1		M1	for at least 3 multiples of both 60 and 84 (can include 60 and 84) or finds the prime factors of both 84 (may be seen in (a)) and 60, may be seen in factor trees	60, 120, 180, 240, 300, 360, 420 84, 168, 252, 336, 420 $60 = 2 \times 2 \times 3 \times 5$ or $2^2 \times 3 \times 5$ If factor tree in (a) is incorrect ft this factor tree in part (b) for M1 only				
		A1	420 or $2 \times 2 \times 3 \times 5 \times 7$ oe					

Paper: 1MA1	Paper: 1MA1/2F						
Question	Answer	Mark	Mark scheme	Additional guidance			
22 (a)	12	M1	for a correct factor tree for either 60 or 84 with no more than one arithmetic error or for listing factors of 60 or 84, at least 4 correct for either (with no more than 1 incorrect in either list), could be in factor pairs or for the prime factors of 60 (2, 2, 3, 5) or 84 (2, 2, 3, 7)	Condone the use of 1 in any factor tree 60: 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60 84: 1, 2, 3, 4, 6, 7, 12, 14, 21, 28, 42, 84			
Q4		A1	for 12 or 2×2×3 oe SC B1 for answer of 4 or 6, if M0 scored	2,2,3 is not enough, it must be a product			
(b)	(b) 120 M1 A1		for a correct factor tree for either 24 or 40 with no more than one arithmetic error or for at least 3 multiples of both 24 and 40 (can include 24 and 40) or for the prime factors of either 24 (2, 2, 2, 3) or 40 (2, 2, 2, 5) or for a common multiple from their lists (\neq 120) for 120 or 2×2×2×3×5 oe	Condone the use of 1 in any factor tree 24: 24, 48, 72, 96, 120, 40: 40, 80, 120, For the list not containing 120, accept the first 3 correct multiples or one error in the first 4 multiples			

Paper: 1MA1/	1 F			
Question	Answer	Mark	Mark scheme	Additional guidance
19 Q5	$2^2 \times 5^3$	M1	for a complete method to find prime factors; could be shown on a complete factor tree with no more than one error or by division by prime factors with no more than one error	Condone the inclusion of 1 for the method marks
	M1 A1	M1 A1	for complete factorisation, eg 2, 2, 5, 5, 5 for $2^2 \times 5^3$	Could be shown on a fully correct factor tree

Paper: 1MA1	Paper: 1MA1/1F							
Question	Answer	Mark	Mark scheme	Additional guidance				
24	2 × 2 × 31	M1	for a complete method to find prime factors; could be shown on a complete factor tree with no more than one error or by division by prime factors with no more than one error or for 2, 2, 31, (1)	Condone the inclusion of 1 for this mark				
		A1	for $2 \times 2 \times 31$ oe	Accept $2^2 \times 31$				
Q6								

Paper: 1MA1/3F								
Question	Answer	Mark	Mark scheme	Additional guidance				
21	168	M1	for a list of at least 3 multiples of each number					
			or for factors 3,2,2,2 oe and 7,2,2,2 oe (could be shown in a factor tree or Venn	Condone the use of 1 as a factor				
07			diagram or table)					
× '								
		A1	cao					

Paper 1MA1: 1F								
Question	Working	Answer	Mark	Notes				
23		2×2×3×3	M1	for complete method to find prime factors; could be shown on a complete factor tree with no more than 1 arithmetic error or $2, 2, 3, 3, (1)$				
Q8			A1	for $2 \times 2 \times 3 \times 3$ oe				

Paper: 1MA1	/3F			
Question	Answer	Mark	Mark scheme	Additional guidance
15	6	P1	for listing the multiples of 3 and 5 to at least the number 15 or $3 \times 5 (= 15)$	3, 6, 9, 12, 15 and 5, 10, 15
Q9		P1 A1	for considering multiples of 15, eg 4 multiples of 15 identified or 100 ÷ 15 (=6.6) or an answer of 7 cao	If in a list of multiples of 3 and 5, multiples of 15 must be clearly identified Sight of 6.6() or $6\frac{2}{3}$ oe or an answer of 7 gets 2 marks.

Paper	Paper: 1MA1/2F							
Question		Answer	Mark	Mark scheme	Additional guidance			
21	(a)	280	M1	for listing at least 3 multiples of both 40 and 56 OR finds the prime factors of both 40 and 56	40, 80, 120, 56, 112, 168, OR 2,2,2,5 and 2,2,2,7			
Q10			A1	cao				
	(b)	60	B1	60 or $2^2 \times 3 \times 5$ oe	2^2 , 3, 5 not enough ie must be a product			

/1F			
Answer	Mark	Mark scheme	Additional guidance
1080	M1	for method to write one number as a product of prime factors (condone one division error in method chosen), eg. one complete factor tree or 2, 2, 3, 3, 3 or 2, 2, 2, 3, 5 or for listing at least 5 multiples of either number (condone one error) or for any common multiple (\neq 1080), eg. 12960 (= 108 × 120)	Accept first 5 multiples if all correct or one error in first 6 multiples
	M1	for method to write both numbers as a product of prime factors (condone a total of one division error) eg. two complete factor trees or 2, 2, 3, 3, 3 and 2, 2, 2, 3, 5 or lists of multiples of the two numbers, at least 5 of each, one of which includes 1080	For the list not containing 1080, accept first 5 multiples if all correct or one error in first 6 multiples
	A1	cao SC B2 for any product that would lead to 1080, eg $2^3 \times 3^3 \times 5$ or $12 \times 9 \times 10$	
	/IF Answer 1080	Answer Mark 1080 M1 M1 M1 Answer M1	IFMarkMark scheme1080M1for method to write one number as a product of prime factors (condone one division error in method chosen), eg. one complete factor tree or 2, 2, 3, 3, 3 or 2, 2, 2, 3, 5 or for listing at least 5 multiples of either number (condone one error) or for any common multiple (\neq 1080), eg. 12960 (= 108 × 120)M1for method to write both numbers as a product of prime factors (condone a total of one division error) eg. two complete factor trees or 2, 2, 3, 3, 3 and 2, 2, 2, 3, 5 or lists of multiples of the two numbers, at least 5 of each, one of which includes 1080A1caoSC B2 for any product that would lead to 1080, eg 2 ³ × 3 ³ × 5 or 12 × 9 × 10