

## Past Paper Questions (MS)



Q1.

Question	Answer	Mark	Mark scheme	Additional guidance
	Two correct factors	B1	for 2 correct factors from 1, 2, 3, 4, 6, 12 and no incorrect factors	Accept one correct product

Q2.

Question	Answer	Mark	Mark scheme	Additional guidance
	10 or 12	B1	for 10 or 12	Accept both 10 and 12 given

Q3.

Question	Working	Answer	Mark	Notes
		$2 \times 2 \times 2 \times 7$	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 $2^3 \times 7$

Q4.

Paper 1MA1:3F				
Question	Working	Answer	Mark	Notes
(i)		12	B1	cao
(ii)		2 or 5	B1	

Q5.

Question	Working	Answer	Mark	Notes
(i)		4 or 5	1	B1 for 4 or 5
(ii)		30 or 40	1	B1 for 30 or 40
(iii)		29	1	B1 cao

Q6.

Question	Answer	Mark	Mark scheme	Additional guidance
	14	B1	cao	



Q7.

	Working	Answer	Mark	Notes
(i)		5,15 or 5,125 or 15,125 or 30,50 or 30,60 or 30,90 or 30,100 or 50,60 or 50,90 or 50,100 or 60,90 or 60,100 or 90,100	4	B1 for 2 numbers, from the list, whose sum is an even number.
(ii)		60 or 100		B1 for 60 or 100 or both
(iii)		5 or 15		B1 for 5 or 15 or both
(iv)		125		B1 cao

Q8.

Question	Working	Answer	Notes
		8	M1 for finding the HCF of any two of the three numbers <b>or</b> for $2^5$ and $3 \times 2^4$ and $2^3 \times 3^2$ A1 cao

Q9.

Paper 1MA1: 2F			
Question	Working	Answer	Notes
		12	M1 Starts to list factors of writes at least one number in terms of prime factors <b>or</b> identifies a common factor other than 1 A1 cao

Q10.

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



Q11.

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Question	Working	Answer	Mark	Notes
		7.21 (am)	3	M1 for listing multiples 9,18,27,36 and 12,24,36 (condone 1 arithmetic error) or method to find LCM M1 for identifying 36 as LCM A1 cao  OR  M1 for listing times 6.54, 7.03, 7.12, 7.21 or for listing times 6.57, 7.09, 7.21 (condone one arithmetic error) M1 for listing times 6.54, 7.03, 7.12, 7.21 and 6.57, 7.09, 7.21 (condone one arithmetic error) A1 cao

Q12.

PAPER: 1MA0_1F				
Question	Working	Answer	Mark	Notes
		$2 \times 2 \times 3 \times 3 \times 5$	3	M1 for continual prime factorisation (at least two consecutive steps correct) or at least two stages of a factor tree correct M1 for a fully correct factor tree or list 2, 2, 3, 3, 5 A1 for $2 \times 2 \times 3 \times 3 \times 5$ or $2^2 \times 3^2 \times 5$

Q13.

Question	Working	Answer	Mark	Notes
		$2 \times 2 \times 3 \times 3$	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)
			A1	for $2 \times 2 \times 3 \times 3$ oe



Q14.

Question	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 ( $= 108 \times 120$ )	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 $12 \times 9 \times 10$	

Q15.

Question	Answer	Mark	Mark scheme	Additional guidance
	3 and 29 or 13 and 19	M1	for two numbers with a sum of 32, only one of which is prime, eg 5, 27 or 1, 31	Do not accept 1 as a prime number.
		A1	cao	