

Q1 June 2017

8	(a)		25	B1	for 25 (accept 5^2)
	(b)		24	B1	cao
	(c)		23, 29	B1	for 23 and 29 and no extras

Q2 June 2018

6		3 and 9	P1	for starting to list factors of 36 or multiples of 3 or odd numbers	Must be at least 3.
			A2	cao	In either order
			(A1)	for one correct answer)	

Q3 June 2018

10	(a)	23, 29	B2	for 23 and 29 and no extras	
			(B1)	for one correct and no more than one incorrect)	2 correct and 1 incorrect award B1
	(b)	Explanation	C1	for decision and explanation eg yes and because all other even numbers have 2 as a factor	Decision is required may be yes or implied by she is ... oe. Do not accept statements that are ambiguous, or contradictory

Q4 June 2018

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
			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

Q5 June 2019

3		At least two of 1, 3, 5, 15	B1	for at least two of 1, 3, 5, 15 with no incorrect values	Accept 3×5 etc.
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Q6 June 2020

12		L23, U23, L29, U29	B2	for all 4 outcomes with no extras or repeats	Pairs must be unambiguous and in the correct order of letter number
			(B1)	for at least 2 correct outcomes out of at most 8 different outcomes or for indicating 23 and 29 are the only prime numbers between 20 and 30)	

Q7 June 2020

21	(a)	$2 \times 2 \times 3 \times 7$	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
			A1	for $2 \times 2 \times 3 \times 7$ oe	Accept $2^2 \times 3 \times 7$
	(b)	420	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 fit this factor tree in part (b) for M1 only
			A1	420 or $2 \times 2 \times 3 \times 5 \times 7$ oe	

Q8 June 2022

4		Suitable number eg 725	B1	for a suitable 3 digit number ending in 0 or 5	
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Q9 June 2023

5		100	B1	cao	
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Q10 June 2023

Subtopic: Primes, Factors and Multiples

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21	$2 \times 2 \times 3 \times 5$	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, 3, 5 (1)	Condone the inclusion of 1 for the method mark
		A1	for $2 \times 2 \times 3 \times 5$ oe	Accept $2^2 \times 3 \times 5$

Q11 June 2024

4	35	B1	cao
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Q12 June 2024

21 (a)	$2 \times 3 \times 3 \times 5$	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, 3, 3, 5	Condone the inclusion of 1 for this mark
		A1	for $2 \times 3 \times 3 \times 5$ oe	Accept $2 \times 3^2 \times 5$
(b)	36	B1	for 36	Accept $2^2 \times 3^2$ or $2 \times 2 \times 3 \times 3$

Q13 Nov 2017

2		42 or 48	B1	42 or 48
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Q14 Nov 2017

7		No	B1	for showing 11 or 13 or 17 or 19 with no non-prime numbers between 10 and 20, or for showing 23 or 29 with no non-prime numbers between 20 and 30. Ignore any numbers shown below 11.
		(supported)	C1	"No" supported by listing 11, 13, 17, 19 and 23, 29 and no non-prime

Q15 Nov 2020

12	L23, U23, L29, U29	B2	for all 4 outcomes with no extras or repeats	Pairs must be unambiguous and in the correct order of letter number
		(B1)	for at least 2 correct outcomes out of at most 8 different outcomes or for indicating 23 and 29 are the only prime numbers between 20 and 30)	

Q16 Nov 2020

21 (a)	$2 \times 2 \times 3 \times 7$	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
		A1	for $2 \times 2 \times 3 \times 7$ oe	Accept $2^2 \times 3 \times 7$
(b)	420	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 fit this factor tree in part (b) for M1 only
		A1	420 or $2 \times 2 \times 3 \times 5 \times 7$ oe	

Q17 Nov 2021

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
			A1	for 12 or $2 \times 2 \times 3$ oe SC B1 for answer of 4 or 6, if M0 scored	2,2,3 is not enough, it must be a product
	(b)	120	M1	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)	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
			A1	for 120 or $2 \times 2 \times 2 \times 3 \times 5$ oe	

Q18 Nov 2023

1	Two of: 1, 2, 3, 6, 9, 18	B1	for 2 correct factors and no incorrect	Allow more than 2 correct factors but no incorrect.
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