Paper 1MA1: 1F				
Question	**Working**	**Answer**	**Mark**	**Notes**
5 **Q1**		47	B1	cao

Paper: 1MA1/1F				
Question	**Working**	**Answer**	**Mark**	**Notes**
11 (a)		36	M1	demonstrates the start of a method that could lead to the answer, eg recognition of square numbers, **or** use of differences, **or** diagrams
			A1	cao
(b)		80	M1	demonstrates the start of a method that could lead to the answer, eg repeated addition of 4, **or** 20 × 4
Q2			A1	ca
(c)			C2	conclusion with supportive evidence, eg odd × odd = odd, **or** all odd numbers squared will be odd.
				(e.g. starts to work with (generate) square numbers for odd patterns or $(2n + 1)^2$
			(C1)	eg 1 × 1 = 1, or generates sequence for squares using differences)

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
9 (a)	Explanation	C2	full explanation eg explains that both 19 and 22 are terms in the sequence **or** solves $3n + 4 = 21$ to find $n = 17/3$ oe **Acceptable examples** 19 is in the sequence and 19 + 3 is more than 21 The 5th term is 19 and the 6th term is 22 7, 10, 13, 16, 19, 22 17 is not in the 3 times table Because 21 is in the 3 times table and the sequence is plus 4	7, 10, 13, 16, 19, 22, ...
Q3		(C1	for substituting to find a term in the sequence **or** forming an equation eg $3n + 4 = 21$ **or** for a partial explanation or an explanation with some ambiguity) **Acceptable examples** The closest number is 22 $3 \times 6 = 18$, 18 + 4 is higher than 21 19 is in the sequence so 21 can't be in the sequence. Starting at 7 and adding 3 each time won't lead to 21 It's the 3 times table plus 4 21 is in the 3 times table **Not acceptable examples** Adding 4 each time won't lead to 21 It doesn't end up at 21, it goes past it	

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
9 (b)	terms given explanation	B1 C1	states two terms eg 7,11 **or** 8,16 **or** 5, 7 explanation eg add one more each time, doubling **Acceptable examples** Add 3 and add 4 The difference goes up by one each time It doubles +1, +2, +1, +2 or indicates +1, +2 repeats itself **Not acceptable examples** It goes up by 1 each time It doubles so $2n$ +1, +2, +3, +4 so $2n + 1$	May be indicated on the sequence with no contradictory statement made

Paper: 1MA1/3F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
26 **Q4**	$6n - 1$	M1 A1	for $6n + k$, where $k \neq -1$ or missing oe	Accept a different variable for M1 only Note $n = 6n - 1$ gets M1 only

Paper: 1MA1/3F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
4 (a)(i)	30	B1	cao	
(ii)	Explanation	C1	for explanation, eg increase by 7, add 7, states $7n - 5$	
Q5				
(b)	65	B1	cao	

Paper: 1MA1/3F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
8	21, 28	B2	both correct	May be written alongside the given sequence but if contradiction accept the answer line. If both correct, accept in either order.
Q6				
		(B1	one correct in the correct position **or** for $15 + 6$ ($= a$) or $a + 7$ ($= b$) where $a \neq 21$ and $b \neq 28$)	May be seen as "+6" next to the sequence

Paper: 1MA1/3F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
13 (a)	example	C1	example given eg 40, 80, etc.	
(b)	No with reason	C1	for No with reason **Acceptable examples** 80 and 88 are both in the sequence 80 is in the sequence and 85 is 5 more 24, 32, ….. 80, 88, …. 85 is not in the 8 times table 85 is an odd number $8n+16=85$ so n is not a whole number. **Not acceptable examples** adding 8 each time will not lead to 85 (insufficient) it goes past 85 Yes …..	No can be implied from their statement
Q7				

Paper: 1MA1/1F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
20 **Q8**	$3n - 2$	B2 (B1	for $3n - 2$ oe for $3n + k$ where $k \neq -2$ or is absent unambiguously shown)	Accept a different variable, eg. $3x - 2$ $n = 3n - 2$ gets B1 only $n + 3$ gets NO marks

Paper: 1MA1/3F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
12 (a)(i)	20, 15	B1	cao	Working may be seen near the sequence
Q9 (ii)	11	B1	cao	Working may be seen near the sequence
(b)	39	B1	cao	

Paper: 1MA1/1F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
13 (a)	Explanation	C1	for explanation **Acceptable examples** the sequence is going +1, +2 so the next term is +3 1 +1= 2, 2 +2= 4, 4 +3= 7 add the current term position to the term to get the next term add the two previous terms and add 1 **Not acceptable examples** you add 1 each time the number goes up by 3 7 is wrong it should be 8 because you double each time	The pattern may be just seen on the sequence given
Q10				
(b)	36	M1 A1	for finding the next term of 10 + 5 (=15) **or** for $\frac{1}{2} \times 8 \times (8 + 1)$ oe cao	

Paper: 1MA1/3F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
10 (i)	terms given	B1	states two terms eg 11, 10 or 9, 6	May be written on the sequence with no contradiction elsewhere
(ii)	explanation	C1	explanation **Acceptable examples** Take away 2 then 1; take away 4 then 3 The difference goes down by 1 each time −4, −3; −2, −1 The differences are 4 and 3; the differences are 2 and 1 **Not acceptable examples** It goes down by 1 each time An algebraic rule	
Q11				

Paper: 1MA1/1F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
9 (a)	Shape drawn	B1	cao	
(b)	9 and 11	B1	cao	Ignore any subsequent values
Q12				

Paper: 1MA1/3F				
Question	**Working**	**Answer**	**Mark**	**Notes**
18 (a)		$3n + 1$	M1	for a method to deduce the nth term, eg. $3n + k$, where k is an integer or k is omitted or for $n = 3n + 1$
			A1	for $3n + 1$ oe (accept n replaced by another letter)
(b)		No (supported)	C1	for using (their expression in (a)) = 90 or shows that 88 or 91 is in the sequence
Q13			C1	for an answer of "No" and a convincing argument eg. pattern number 30 has 91 counters or $(90 - 1) \div 3$ (= 29.66…) or shows that the next term after 88 is 91 Note: no ft from (a)

Paper 1MA1: 2F				
Question	**Working**	**Answer**	**Mark**	**Notes**
25 (a)		$5n - 2$	B2	fo $5n - 2$ oe
Q14			[B1	for $5n + k$, k may be 0]
(b)		No (supported)	C1	for No with evidence, e.g. $3 \times 4^2 = 48$, $\sqrt{48}$ is not an integer, he has multiplied by 3 first but should have squared first

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
26 **Q15**	Shown (supported)	M1 M1 A1	for method to find at least two terms, eg $2 \times 4^2 - 1$ (= 31) **and** $40 - 3^2$ (= 31) for generating at least three correct terms of each sequence for generating at least the terms 1, 7, 17, 31, 49 of the first sequence **and** at least the terms 39, 36, 31, 24, 15, 4 of the second sequence	1 7 17 31 49 71 97 127 161 199 39 36 31 24 15 4 –9

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
28 (a) (b) **Q16**	24, 39 8*a*	B1 M1 A1	cao for a complete method to find the next 2 terms, eg. $a + 2a$ (= $3a$) **and** $2a$ + "$3a$" (= $5a$) $8a$ oe	SC: B1 for 3, 5, 8 seen if M0 scored

Paper: 1MA1/3F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
25 **Q17**	12	P1 P1 A1	for a process to find the fifth term eg 3a + 5a (=8a) for setting up the equation eg $a + 2a + 3a + 5a + [8a] = 228$ cao	[8a] allow use of what is clearly indicated as the missing term $\frac{228}{19}$ or $\frac{228}{1+2+3+5+8}$ scores P1 P1 $\frac{228}{1+2+3+5+[8]}$ scores P0 P1

Paper: 1MA1/2F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
20 (a)	$6n + 1$	B2	oe	
		(B1	for $6n + c$ where c is an integer $\neq 1$ or is missing)	
(b) **Q18**	Shown with supportive working	M1	for $8 - 6n = -58$ or $8 - 6 \times 11$ ($= -58$) **or** starts to list terms of the sequence, with at least 3 correct or any other valid method.	2, −4, −10, −16, −22, −28, −34, −40, −46, −52
		A1	shown with working or an explanation , eg Yes and 11 or 2, –4, –10, –16, ..., –52, –58	May stop at −58 or ring if sequence continues

Paper: 1MA1/3F				
Question	**Answer**	**Mark**	**Mark scheme**	**Additional guidance**
8 (a)	28	B1	cao	
(b) **Q19**	Explanation	C1	for explanation **Acceptable examples** all terms end in 3 or 8 there are no terms that end in 0 50 does not end in 3 or 8 48 and 53 are both in the sequence (could be shown) 48 is in the sequence and 50 is 2 more $5n–2=50$ so n is not a whole number. if it started at 0 then it would but it starts at 3 so it never will or shows sequence continuing up to and beyond 50 **Not acceptable examples** adding 5 each time will not lead to 50 (insufficient) it goes past 50 the closest number to 50 is 48	One correct, one incorrect statement gets C1 as long as they are not contradictory.