Answers and mark guide

Q	Answer	Working	Marks
1	**15, 17**	The sequence goes up by 2 each time.	1
2	**8n + 7**	Difference 8, so 8n; first term 15 − 8 = 7	2
3	**37**	4×7 + 9	2
4	**3n + 2**	Common difference 3	2
5	**4, 9, 14**	Substitute n = 1, 2, 3.	2
6	**−2n + 23**	Difference −2; −2n + 23	3
7	**Yes (it is term 30)**	2n + 5 = 65 gives n = 30, a whole number.	3
8	**No**	6n = 205, so n = 34.17..., not a whole number.	3
9	**52**	nth term = 2n + 4; at n = 24	3
10	**14**	nth term = −2n + 54	3
11	**6n**	Difference = (54 − 12) ÷ 7 = 6	4
12	**9**	5n + 3 = 48	4
13	**102**	n > 32.33, so n = 33	4
14	**41**	3×13 + 2	4
15	**13**	5n + 2 = 67	4
16	**Not a term**	4n + 4 = 125 gives n = 30.250..., which is not a whole number.	4
17	**n = 5**	3n + 9 = 5n − 1; 10 = 2n	5
18	**415**	Sum = 10/2 × (first + last)	5
19	**90**	(50 − 20) × 3	4
20	**14**	(5+6)×6 + 2×8 − (10×6 + 8)	5

My score: _____ / 67 Questions 1–15 = 44 marks (Foundation focus)