Draw a position and term table for every question, even when you can see the answer without one.

1 Write down the nth term of each sequence.

(a) $2, 4, 6, 8, \ldots$ (1)

(b) $5, 10, 15, 20, \ldots$ (1)

(c) $10, 20, 30, 40, \ldots$ (1)

(d) $7, 14, 21, 28, \ldots$ (1)

(4 marks)

2 Write down the nth term of each sequence.

(a) $4, 5, 6, 7, \ldots$ (1)

(b) $8, 9, 10, 11, \ldots$ (1)

(c) $0, 1, 2, 3, \ldots$ (1)

(d) $-2, -1, 0, 1, \ldots$ (1)

(4 marks)

3 Complete each table and write down the nth term.

(a) Position $1, 2, 3, 4$; Term $3, 6, 9, 12$ (1)

(b) Position $1, 2, 3, 4$; Term $3, 5, 7, 9$ (1)

(c) Position $1, 2, 3, 4$; Term $5, 8, 11, 14$ (1)

(d) Position $1, 2, 3, 4$; Term $1, 5, 9, 13$ (1)

(4 marks)

4 Use the rule to find the terms asked for.

(a) The nth term is $4n$. Find the 10th term (1)

(b) The nth term is $n + 6$. Find the 25th term (1)

(c) The nth term is $3n - 1$. Find the 50th term (1)

(d) The nth term is $2n + 5$. Find the 100th term (1)

(4 marks)

5 **Pattern 1 is built for you.** To make the next pattern, **a new column of 2 cubes is added on the right**. The single cube underneath is in every pattern.

Build it with cubes, then check against the picture.



Pattern 1

(a) How many cubes in pattern 4? (1)

(b) Write down the nth term (1)

(c) How many cubes in pattern 20? (1)

(d) In your pattern, which cube is the $+1$? Describe it. (2)

(5 marks)

6 A sequence has nth term $5n - 2$.

(a) Write down the first four terms (1)

(b) Find the 12th term (1)

(c) Write down the term-to-term rule for this sequence (1)

(3 marks)