Geometrical terms – 2021 O Level Math D

1. Nov/2021/Paper_11/No.20

These are the first five terms of a sequence.

4 8 16 32 64

(a) Find the next number in the sequence.

..... [1]

(b) The nth term of the sequence above is 2^{n+1} .

Write down an expression, in terms of n, for the nth term of these sequences.

(i) 1 5 13 29 61 …

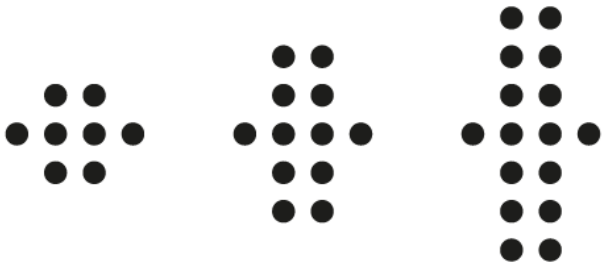
..... [1]

(ii) 10 19 32 53 90 …

..... [2]

2. Nov/2021/Paper_22/No.4

(a) Here are the first three patterns in a sequence made from counters.



Pattern 1 Pattern 2 Pattern 3

(i) Complete the table for the patterns in this sequence.

Pattern number	1	2	3	4	5
Number of counters	8	12	16		

[1]

(ii) Find an expression, in terms of n, for the number of counters in Pattern n.

..... [2]

(iii) Jamal has 150 counters.
He uses these counters to make the largest pattern possible, Pattern p.

Find the value of p.

$p =$ ..... [2]

(b) The 4th term in a different sequence is 26.
This sequence is linear and the 8th term is 2.

(i) Find the first term of this sequence.

..... [2]

(ii) Find an expression, in terms of n, for the nth term of this sequence.

..... [2]

3. June/2021/Paper_12/No.20

Here are the first four terms of a sequence.

$$\frac{12}{16} \quad \frac{17}{25} \quad \frac{22}{36} \quad \frac{27}{49}$$

Find an expression for the nth term of the sequence.

..... [4]