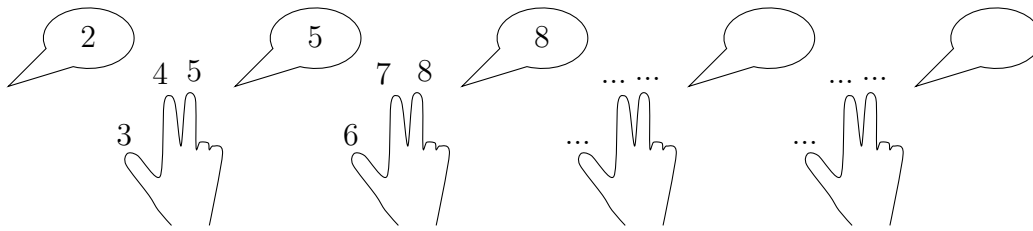
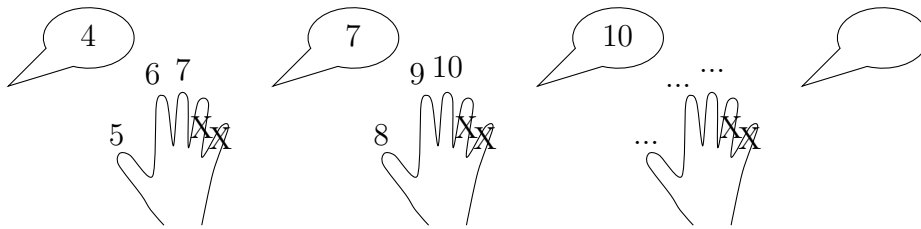


1. The sequence in the speech bubbles has a term to term rule of + 3



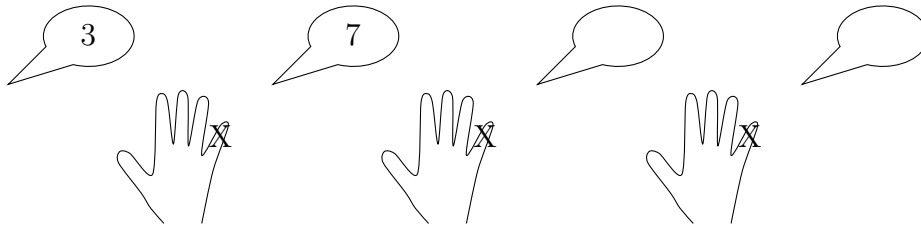
Complete the next two terms.

2. The speech bubbles show a sequence with a term to term rule of + 3



(i) Complete the next term.

Here is another sequence with a term to term rule of + 4



(ii) Complete the next two terms.

3. The speech bubbles show an arithmetic sequence.



Radhiya says the term to term rule is + 2

Is she correct?

You must give a reason for your answer.

.....

4. Here are the first five terms of an arithmetic sequence.

3      8      13      18      23      .....      term to term rule is + .....

Complete the next term and the term to term rule.

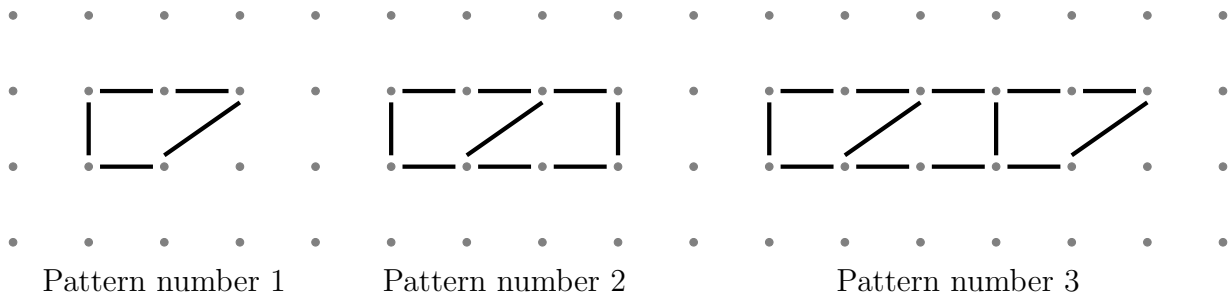
5. Here are the first five terms of an arithmetic sequence.

5      9      13      17      21

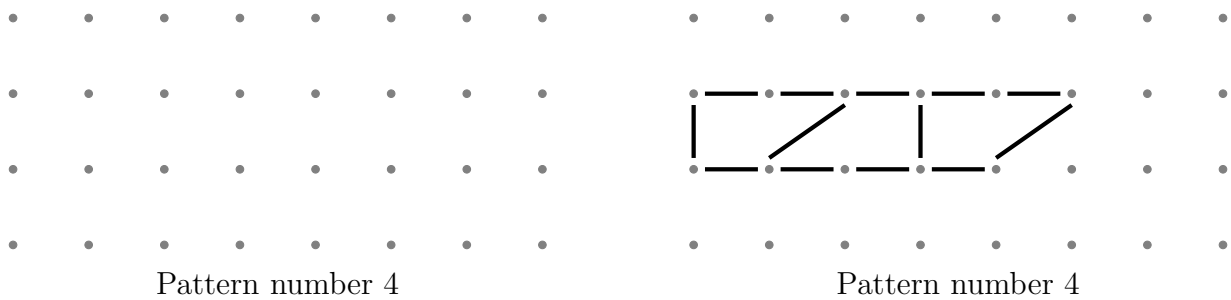
(i) Write down the term to term rule of the sequence .....

(ii) Write down the next term of the sequence .....

6. Here is part of a sequence of patterns made from sticks.



(a) In the space, below draw Pattern number 4 {OR ... **complete** Pattern number 4 }



(b) Complete the table

Pattern number	1	2	3	4	5
Number of sticks	5	9	13		

7. Here are the first five terms of a sequence.

3      6      9      12      15

Write down an expression for the  $n$ th term of this sequence.

8. Here are the first five terms of a sequence.

5      10      15      20      25

An expression for the  $n$ th term of this sequence is  $5n$

Write down in terms of  $n$ , an expression for the  $n$ th term of a sequence whose first five terms are

7      12      17      22      27

9. Here are the first four terms of an arithmetic sequence.

5      8      11      14

Find, in terms of  $n$ , an expression for the  $n$ th term of this arithmetic sequence.

10. Here are the first five terms of an arithmetic sequence.

2            8            14            20            26

Find the 8th term of this sequence.

11. (a) Here are the first five terms in a sequence.

16            13            10            7            4

Write down the 8th term of the sequence.

(b) Here are the first four terms in a number sequence.

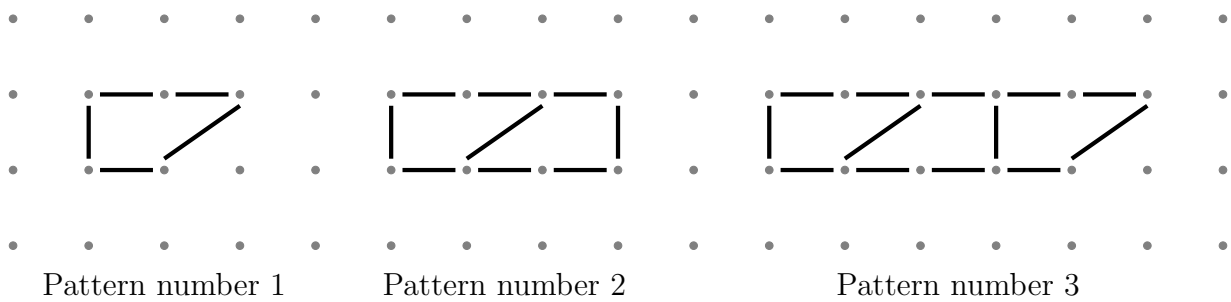
33            27            21            15

(i) Write down the term to term rule of the sequence .....

(ii) Write down the next term of the sequence .....

12. Here are the first three patterns in a sequence.

The patterns are made of sticks.



How many sticks are there in pattern number 7?

13. Here are the first five terms of an arithmetic sequence.

2            8            14            20            26

(a) Noah thinks that the number 64 is in this sequence.

Is Noah correct?

You must show how you get your answer.

(b) Is 64 a term of the sequence?

Explain how you got your answer.

14. (a) Write down the 19th odd number.

(b) These five even numbers form an arithmetic sequence

2      4      6      8      10

(i) Write down, in terms of  $n$ , an expression for the  $n$ th term of this sequence . . . .

(ii) Write down the 25th even number . . . .

(c) An expression for the  $n$ th term of this sequence of even numbers is  $2n$

2      4      6      8      10

Write down

(i) an expression, in terms of  $n$ , for the  $n$ th term of this sequence of odd numbers

1      3      5      7      9      . . . .

(ii) the 14th odd number . . . .

15. The  $n$ th term of a number sequence is given by  $3n + 1$  .

Work out the first **four** terms of the number sequence

16. The  $n$ th term of a number sequence is given by  $7n - 4$  .

Is 120 a term of this number sequence?

Explain how you get your answer.