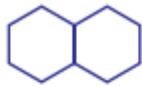


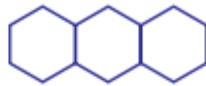
1 Here is a sequence of patterns made up of hexagons.



Pattern 1



Pattern 2



Pattern 3



Pattern 4

- a Write down the rule for this sequence.
- b Draw Pattern 5

2 Here is a sequence of patterns made up of crosses.



Pattern 1



Pattern 2



Pattern 3



Pattern 4

- a Write down the rule for this sequence.
- b Draw Pattern 5
- c Copy and complete the table.

Pattern number	1	2	3	4	5	6
Number of crosses	1	5	9	13		

3 Here is a sequence of patterns made up of hexagons.



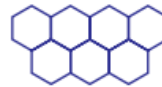
Pattern 1



Pattern 2



Pattern 3



Pattern 4

- a Write down the rule for this sequence.
- b Draw Pattern 5
- c Copy and complete the table.

Pattern number	1	2	3	4	5	6
Number of hexagons	1	3	5	7		

- d Write down the number of hexagons in Pattern 9

4 Here is a sequence of patterns made up of dots and squares.



Pattern 1



Pattern 2



Pattern 3

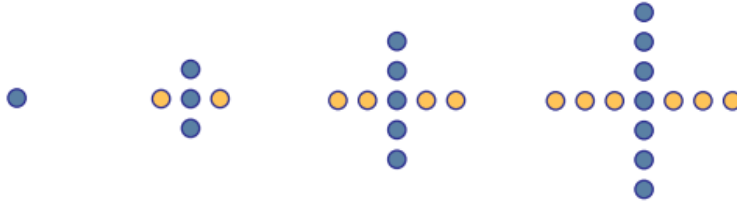


Pattern 4

- a Write down the rule for the sequence of dots.
- b Write down the rule for the sequence of squares.
- c Draw Pattern 5
- d Copy and complete the table.

Pattern number	1	2	3	4	5	6
Number of dots	3	6	9	12		
Number of squares	1	2	3	4		

5 Here is a sequence of patterns made up of blue and yellow dots.



Pattern 1 Pattern 2 Pattern 3 Pattern 4

a Copy and complete the table.

Pattern number	1	2	3	4	5	6
Number of blue dots	1	3	5	7		
Number of yellow dots	0	2	4	6		
Total number of dots	1	5	9	13		

b Write down the total number of dots in Pattern 10

6 Here is a sequence of numbers.

5, 7, 9, 11, ...

- Write down the third term
- Write down the rule for this sequence.
- Write down the next two terms of this sequence.
- Work out the ninth term of this sequence.

7 Here is a sequence of numbers.

24, 21, 18, 15, ...

- Write down the rule for this sequence.
- Write down the next two terms of this sequence.
- Work out the eighth term of this sequence.
- Which term in this sequence is 0?

8 Write down the third and fourth terms of each of these sequences.

- a 2, 4, ..., ..., 10, 12, ... b 2, 4, ..., ..., 32, 64, ...

9 Here is a sequence of numbers.

41, 37, 33, ..., ..., 21, 17, ...

- Write down the rule for this sequence.
- Write down the fourth and fifth terms.
- Work out the tenth term.

10 a Write down the next two terms in each of these sequences.

- i 1, 2, 3, 4, ... ii 2, 3, 5, 8, ...

- b Use the sequences in part a to work out the next two terms in the sequence
3, 5, 8, 12, ...

11 a Write down the next two terms in each of these sequences.

- i 1, 3, 5, 7, ... ii 1, 2, 4, 8, ...

- b Use the sequences in part a to work out the next two terms in the sequence
2, 5, 9, 15, ...