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


Pattern number 1


Pattern number 2


Pattern number 3
(a) In the space, below complete pattern number 4


Pattern number ...
(b) Complete the table

| Pattern number | 1 | 2 | 3 | 4 | 5 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Number of sticks | 6 | 11 | 16 |  |  |

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


Pattern number 1 Pattern number 2 Pattern number 3
(a) In the space, below draw Pattern number 4

Pattern number 4
(b) Complete the table

| Pattern number | 1 | 2 | 3 | 4 | 5 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Number of sticks | 6 | 9 | 12 |  |  |

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


Pattern number 1
Pattern number 2
Pattern number 3
(a) In the space, below draw Pattern number 4

(b) Complete the table

| Pattern number | 1 | 2 | 3 | 4 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Number of sticks | 4 | 7 | 10 |  |  |

4. Here is part of a sequence of patterns made from rectangles and triangles.


Pattern number 1


Pattern number 2


Pattern number 3
(a) In the space, below draw Pattern number 4
(b) Complete the table

| Pattern number | 1 | 2 | 3 | 4 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Number of triangles | 4 | 6 | 8 |  |  |

Answers

1. (a) 4 hexagons joined together
(b) 21,26
2. (a) "house" with 3 sticks on top of roof, 4 sticks in the middle and 4 sticks on the ground, one vertical stick either side for the "walls" and one sloping stick either side for the "roof" sides
(b) 15,18
3. (a) 4 squares joined together
(b) 13,16
4. (a) large "arrow head" with 3 "tail feathers" or 2small triangles with 4 "tail feathers"
(b) 10,12
