GCSE FOUNDATION · REVISION MAT 5

Generating sequences

1 Here are the first four terms of a sequence.

11, 16, 21, 26, ...

(a) Write down the next two terms.

(b) Write down the term-to-term rule.

2 The nth term of a sequence is $7n - 3$

(a) Work out the first three terms.

(b) Work out the 10th term.

3 Here is a sequence.

4, 12, 20, 28, ...

Is 100 a term in this sequence?
Explain your answer.

4 The rule for a sequence is

"multiply by 2, then add 1"

The first term is 4.

Show that the 5th term is 79.

5 Here are some patterns made from sticks.



Pattern 1 **Pattern 2** **Pattern 3**

(a) How many sticks are needed for pattern 25?

(b) Which pattern uses 82 sticks?

6 In a sequence, each term is the sum of the two terms before it.

The 1st term is 6. The 4th term is 26.

Find the 2nd and 3rd terms.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 5

Generating sequences

1 (a) **31, 36**

(b) **Add 5**

2 (a) **4, 11, 18**

(b) **67**

3 nth term = $8n - 4$

$8n - 4 = 100$ gives $n = 13$

Yes, it is the 13th term.

4 **4 → 9 → 19 → 39 → 79** ✓

5 Sticks go up by 3 each time: nth term $3n + 1$

(a) **76**

(b) **Pattern 27**

6 Terms: $6, b, 6 + b, 6 + 2b$

$6 + 2b = 26$, so $b = 10$

2nd = **10**, 3rd = **16**