GCSE FOUNDATION · REVISION MAT 4

Generating sequences

1 Here are the first four terms of a sequence.

40, 34, 28, 22, ...

(a) Write down the next two terms.

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

2 The nth term of a sequence is $5n + 2$

(a) Work out the first three terms.

(b) Work out the 10th term.

3 Here is a sequence.

7, 10, 13, 16, ...

Is 52 a term in this sequence?
Explain your answer.

4 The rule for a sequence is

"multiply by 4, then add 1"

The first term is 1.

Show that the 5th term is 341.

5 Here are some patterns made from sticks.



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

(a) How many sticks are needed for pattern 12?

(b) Which pattern uses 89 sticks?

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

The 1st term is 2. The 4th term is 18.

Find the 2nd and 3rd terms.

Mr&Mrs MATHS

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Generating sequences

1 (a) **16, 10**

(b) **Subtract 6**

2 (a) **7, 12, 17**

(b) **52**

3 nth term = $3n + 4$

$3n + 4 = 52$ gives $n = 16$

Yes, it is the 16th term.

4 **1 → 5 → 21 → 85 → 341** ✓

5 Sticks go up by 2 each time: nth term $2n + 1$

(a) **25**

(b) **Pattern 44**

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

$2 + 2b = 18$, so $b = 8$

2nd = **8**, 3rd = **10**

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