

LOOKING FOR PATTERNS

TASK 1 **3, 6, 12, 24, ...**

Find the next two numbers in the pattern:

3, 6, 12, 24, _____, _____

Describe the method you used to find the next two numbers.

TASK 2 **9, 16, 25, 36, ...**

Find the next two numbers in the pattern:

9, 16, 25, 36, _____, _____

Describe the method you used to find the next two numbers.

TASK 3 **5, -10, 20, -40, ..., -160**

What is the missing number in this pattern?

5, -10, 20, -40, _____, -160

Describe the method you used to find the number.

TASK 4 **3, 5, 9, 17, 33, ...**

Describe the rule for the number pattern:

3, 5, 9, 17, 33, ...

TASK 5

Use a rule

A pattern is described in the following way:

To get the next term, double the previous term then add 3.

a If the 1st term is 5, what will be the 3rd term?

b If the 8th term is 20, what was the 7th term?

CHALLENGES

a The rule for a number pattern is: *Multiply each term by -1 .*

If the 1st term is 7, what will be the 101st term?

b The rule for a number pattern is: *Multiply each term by -1 .*

What is the sum of the first 10 terms?

c 1, 1, 2, 3, 5, ...

These are the first five Fibonacci numbers. Each term is the sum of the previous two terms.

Fill in the missing terms in this Fibonacci pattern.

_____, _____, 987, 1597