

Sequencing smartly

This task is about number sequences.

In each of the number sequences, each number is the sum of the two numbers that come before it.

- (a) Here are the 3rd to 7th terms of one of the number sequences.
What are the first two terms of the sequence?

		5	2	7	9	16
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- (b) Here is some information about two more of these number sequences.

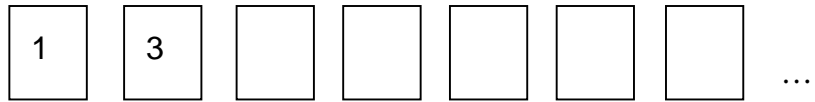
a	b			10
b	a			5

What are the values of a and b ?

- (c) Show that the sequence below will never contain two consecutive terms that are both even.

1	3						...
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- (d) Now show that the sequence will never contain a multiple of 5.



You may find it helpful to consider the remainders when each term in the sequence is divided by 5.

- (e) Investigate for what values of e and f the sequence below will contain multiples of 5.

