

Sujet n°1 Bis

Please do not write on the subject paper and don't forget to give back the examination paper at the end of the test

SEQUENCES

A water Lily is growing on the surface of a pond. Each day, it becomes twice larger.
On the 1st of May, a 2cm radius waterlily is born on the middle of the 50m radius pond.

1. What is the waterlily area on the 1st of May ? Label this A_1 .
2. If we label A_n the waterlily area ($n-1$) days after the 1st of May, so that it means that A_{24} is the area on the 24th of May. What will be the value of A_2 ? Express A_{n+1} in terms of A_n .
3. What type of sequence is (A_n) ?
4. Express A_n in terms of n and A_1 .
5. We want to know on which day the water lily will completely cover the pond. Compute this date.

NB :

a water lily : un nénuphar

a pond : un étang