WATER LILIES

There are some water lilies in a lake.

The area that they cover doubles in size every day.

After 17 days the whole lake is covered with water lilies.

How long did it take them to cover half the lake?

HELP

This problem is easy. Don't look for any complicated method to find the answer.

NEXT

What fraction of the pond was covered on the first day?

NOTES FOR TEACHERS

SOLUTION

On the 16th day the lilies covered half the lake and then doubled in size to cover the whole lake in one day. So it took 16 days to cover half the lake.

Why do this activity?
This activity makes a good lesson starter for a lesson on exponents or on finance, growth and decay. It is also much easier than it looks.

Learning objectives
In doing this activity students will have an opportunity to gain a deeper understanding of exponential growth.

Generic competences
In doing this activity students will have an opportunity to:
- develop reading comprehension
- **think mathematically,** reason logically and give explanations;
- **think flexibly**, be creative and innovative and apply knowledge and skills.

Suggestions for teaching
Use this problem as a lesson starter. Have it written on the board as learners come into the classroom and tell them to solve the problem but not to discuss it. You will want many learners to think of the answer for themselves.

To give a hint to the learners who have not seen how to find the answer, and only just before you want to move on to the main part of the lesson, ask "What about the day before?" and then invite learners to share the answer and explain how they found it.

Key questions
- What about the day before?
- What fraction was covered on the day before?

Follow up
Dating made easier
https://aiminghigh.aimssec.ac.za/grades-9-to-12-dating-made-easier/
Matching Exponentials
 https://aiminghigh.aimssec.ac.za/years-11-12-matching-exponentials/

Go to the **AIMSSEC AIMING HIGH** website for lesson ideas, solutions and curriculum

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