

SHQ: How can I record my observations in a maths investigation

GARDEN POND INVESTIGATION

In the previous worksheet, we started the garden pond investigation for a square pond.

This time, we are going to try the investigation for a rectangular pond.

Don't worry if you couldn't find the formula for the square pond : drawing diagrams and tables and looking for patterns are all really useful skills that you will be using in your next school.

For this worksheet, you will once again need to read instructions, draw diagrams, fill in tables and write sentences about any patterns that you notice in the numbers you find.

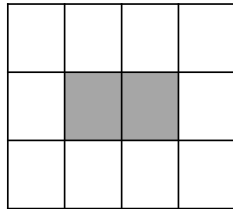
You will read the problem and begin drawing some of the diagrams from which you can start making some conclusions.

Use the graph paper resource to draw your diagrams and if possible, use a ruler to draw the straight lines in the diagrams.

The following pages of this worksheet give you details about what you are to draw and what patterns you are to look for but you will also need to refer to worksheet 7 as the investigation follows the same process in terms of diagrams and tables that you will need to draw.

GARDEN POND INVESTIGATION RECTANGULAR POND

The man is now thinking of building a long, thin rectangular pond with slabs around. The first pond is 2m x 1m :



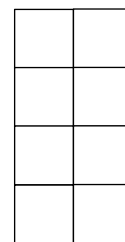
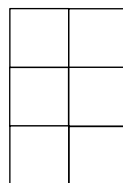
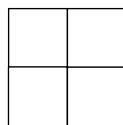
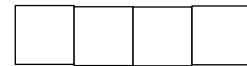
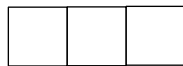
Pond size:

2m x 1m

Number of
slabs: 10

- Draw the first 3 pond sizes with their slab arrangement
- Make a table and record the information (pond size ; no. of slabs)
- Is the formula the same?
- If not, what formula does work for these pond sizes
- Try the formula with the next pond size, then draw the diagram to check

There are two different ways your pond could grow. You choose which pattern to follow:



If you find the formula difficult, use this to practice drawing diagrams and recording your results in a table. Look for patterns as the numbers 'grow' and write sentences explaining what you see.

We look forward to hearing about your conclusions and seeing your diagrams.

