EXPANDING PATTERN
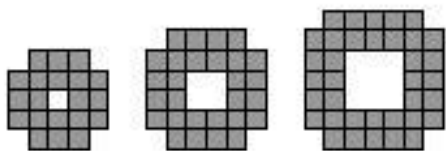

The diagram shows the first three patterns in a sequence in which each pattern has a hole in the middle.
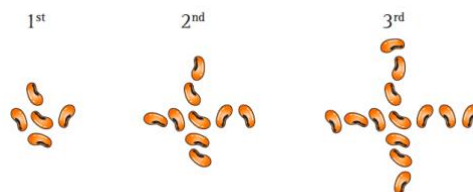Draw the 4th and 5th pattern in the sequence.

How many small squares are needed to build the tenth pattern in the sequence?

What about the 100th pattern?

HELP

If you find the Expanding Pattern activity tricky then answer the same questions for this pattern made from dried beans.
It is easier.

NEXT

Create your own sequences of patterns with dried beans and on squared paper, and work out the rule for the number of beans in each pattern or the number of squares. Then exchange your patterns and solve each other's problems.