

HATCHING ANSWERS

*William H. Kraus
Wittenberg University
Springfield, OH 45501*

"I have to think very hard about a problem but this thinking never leads me anywhere; it is but a necessary priming process. Finding myself unable to solve the problem, I let it sink into my subconscious. How long it stays there varies. Then, unexpectedly, the solution is passed into my conscious mind."

*Albert Szent-Gyorgyi
(discovered vitamin C)*

*Quotation from The Cerebral Symphony, by
William H. Calvin, Bantam, 1990*

We have all had the experience of working unsuccessfully on a problem (mathematical or otherwise), leaving the problem for awhile to do something else, and then having a sudden insight into how the problem might be solved. This process is known as incubation, and it generally includes the following steps.

1. You make a serious attempt to solve the problem. The more fully you are initially involved in the problem, the more likely incubation is to be successful.
2. You temporarily stop working on the problem and do other things for a substantial period of time (often a day or more). During this incubation period, your mind continues to work subconsciously on the problem or on ideas related to the problem.
3. Sometimes a complete solution comes to you suddenly. More often you think of a new approach that you might be able to use to solve the problem. Sometimes there is no recognizable insight, but when you again work on the problem you are able to solve it.

Last year Louise Barch, the Director of Teacher Certification and Placement at Wittenberg University, brought me a set of problems. (She enjoys problem solving and knows that I do too.) Each problem consisted of an "equation" that included initials for which you were to supply the appropriate words. For example, the solution to "26 = L of the A" would be "Letters of the Alphabet".

I solved several of the problems immediately, but I was stumped by many of

the others. At odd moments over the next few days, solutions occurred to me. I assigned the problems to my students with the condition that they not seek any help from anyone else on the problems. Two days later they reported to me that they too had solved some immediately and had many others "pop in" later. Since then I have used these problems as a simple illustration of the incubation process.

Below I have listed some of the problems that Mrs. Barch gave to me, some that I made up, and some that my students made up. Try to solve them now. You will probably not solve all of them immediately, but over the next few days, many of the answers will suddenly occur to you as the incubation process works.

7 = W of the W	12 = S of the Z
88 = P K	24 = H in a D
52 = W in a Y	10 = L I
40 = D and N of the G F	64 = S on a C
9 = P in the S S	8 = S on a S S
1 = W on a U	29 = D in F in a L Y
50 = W to L Y L	13 = D in a B D
2 = S of R in K R B	5 = D in a Z C
7 = C of the R	2 = A B P on a S S B
18 = W on a S	4 = B in a W N
9 = D in a S S N	8 = N in an O

You may incubate until the next issue of The Ohio Journal. Answers will be hatched then.

The Editors

MATH SCRAMBLER answers: CUBED TOTAL ABACUS TWENTY

She went "DATAWAY" !