

A-MAZE YOUR FRIENDS!

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Suppose you are given a maze which you have to travel right through (there is an entrance and an exit). One way of doing so is to always keep to one side. What I want to show you is another method.

Choose any point on any wall of the maze, and use one colour, colour all those walls connected to that point. (If there is a way through the maze, not all the walls will be connected).

Next, choose any point on any wall not coloured with the first colour, and, using a second colour, colour all the walls connected to that point.

Continuing in this way, the maze will separate into two or more components each coloured with a different colour. Now it is easy to find all the routes through the maze. Simply wend your way between components of different colours (see figures below).

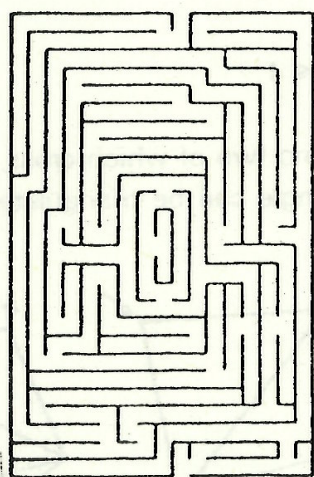


Figure 1

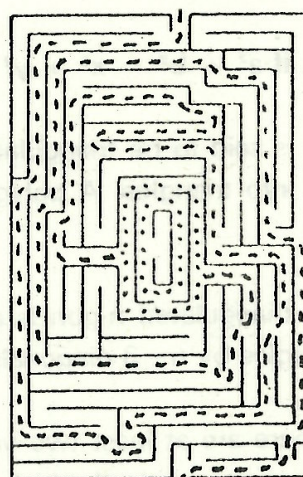


Figure 3

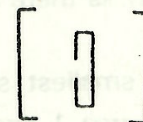
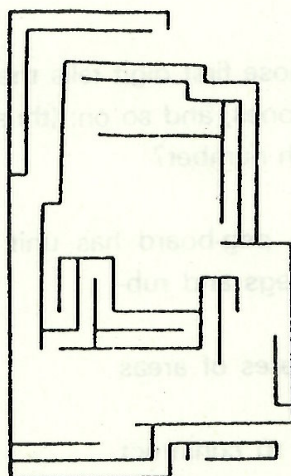
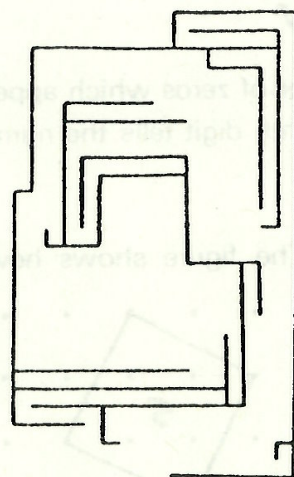


Figure 2

* Andrew Lenart is in year 12 at North Sydney Boys' High. He wrote to us about mazes in 1976.