

LABYRINTH

There is a unique path that begins from Start (S) and finishes at End (E) that passes through every one of the other squares just once. The path goes horizontally and vertically only. To find it you need to mark in the hedges along the edges of squares and so form a labyrinth. The numbers at the end of each line tell you in order, the length of each segment of hedging.

There must be at least one segment of unhedged line between adjacent hedges.

Example

3 1 2 

A segment three hedge bits long is followed by a single hedge length followed by a segment two hedge bits long. Hint: you may find using two colours useful – say, red for the hedges and black for the path. or make the hedges thick and the path thin. If you can find the hedges you can mark in the path and if you can mark in the path you can find the hedges!

Solving Tips

HEDGES – Using the numbers at the ends of the lines it is possible to work out where parts or all of some hedges can be marked in.

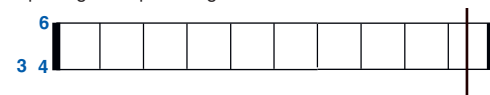


There are ten possible hedge sections along these lines. Whichever end you start from the 6-hedge must fill the two central segments.

The 3-hedge and 4-hedge take up seven segments and with at least one hedgless section between them need eight of the ten possible places. Again, trying the extremes from each end shows where the possible hedges must overlap.



When sections of path have been found, this may help you to work out where more of the hedges must be placed. Suppose a path goes up through the tenth column:



The length of the line is reduced to nine segments. $9 - 6 = 3$. So $6 - 3 = 3$ parts of the 6-hedge can be placed. Also, for the 3-hedge and 4-hedge an additional segment can be added.



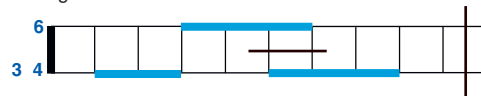
This technique is the classic method of solving Hanjie puzzles.

PATHS

As the path must go through every square except Start and End you can draw the path round each corner of the grid straightaway (unless it has an S or E in it).

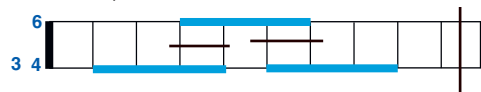


If two sides of a square are hedges the path can be marked in through the other two sides.

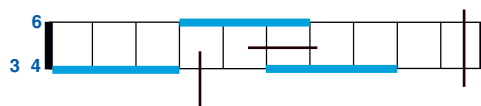


ADVANCED LOGIC

Look at the diagram above. If the 3-hedge filled segments two to four the path would look like this:



The two paths bits would meet in square five. But that would mean a hedge bit at the bottom of the square which would join the hedges together into one big hedge. That is not allowed, so we know the 3-hedge begins in segment one. Now we know where the 3-hedge ends we can draw a piece of path at right angles to it across the right-hand end.



Sample solution

