The following algorithm is for both task 1 and task 2.  
For task 2 we chose to solve a maze with holes or with no exits.

START

IF It is possible to move

IF It is possible to mark or memorize the junctions

WHILE exit is not reached AND whole maze is not discovered

IF Number of undiscovered path nearby > 1

Mark current location as junction

For number of junctions n reached

Mark junction as j(n)

IF Junction is marked AND undiscovered paths ≤ 1

Remove j(MAX) from the list

REPEAT

IF There is >=1 undiscovered paths nearby

While hole or deadend not reached

Enter random undiscovered path

Move along it

Mark the area passed as discovered

Return to j(MAX)

UNTIL Junction is reached OR Got to the exit OR The whole maze was discovered

IF The exit is reached

Leave the maze

END

IF The whole maze was discovered but exit is not reached

Yell "help me!”

ELSE

While exit not reached

Walk in random directions

END

ELSE

Wait for help

IF The exit is reached

Leave the maze

END