Maze Game Maker Challenges

The Grid Coordinates

The Hyperspace Arrows

1. Make Hyper A position in a good place when the game starts (use a "when green flag clicked" with a "goto").
2. Make Hyper B position in a good place when the game starts (use a "when green flag clicked" with a "goto").
3. In the cat, make a new block function (under More Blocks) named "Check Hyper". Call this function at the end of the cat's TryMove function. "Check Hyper" should:
    a. Check if the cat is touching Hyper A. If so, move the cat so it's in a space next to Hyper B.
    b. Check if the cat is touching Hyper B. If so, move the cat so it's in a space next to Hyper A.

The Key and the Door

1. Make the key position in a good place and show itself when the game starts.
2. Make the door position in a good place when the game starts, so that it's blocking the cat from being able to solve the maze. Set it's costume to the dark blue one.
3. Make a variable named "got key" and set it to 0 when the game starts.
4. At the end of the cat's TryMove function, check if the cat is touching the key. If so:
   a. Hide the key.
   b. Set the "got key" variable to 1.
5. Insert code after the first two lines of the cat's TryMove function to check if it's touching the door and if the "got key" variable equals 1. If so, change the door's costume to the light blue to "open" the door.

The Dumb Ghoul

1. Make it so the Dumb Ghoul starts in a good place when the game starts.
2. Give the Dumb Ghoul a TryMove function similar to the cat's TryMove function:

3. When the game starts, have the Dumb Ghoul use a "forever" loop to keep moving randomly. To do this:
   a. Make a variable named "direction".
   b. Set direction to a random number from 1 to 4.
   c. If direction is 1, call TryMove to move the ghoul up.
   d. If direction is 2, call TryMove to move the ghoul down.
   e. If direction is 3, call TryMove to move the ghoul left.
   f. If direction is 4, call TryMove to move the ghoul right.
4. Make a "when I receive 'cat go home'" handler in the cat. When the cat gets this message, move it back to its starting position.

The Line Ghoul

The Line Ghoul is like the Dumb Ghoul, except instead of just moving one random space at a time, it picks a direction and moves as far as it can in that direction until it hits a wall. Here is the way to think about it:

1. Repeat until the ghoul is touching the blue color:
   a. Move in the given direction.
   b. Check if the ghoul is touching the cat
2. Move the ghoul back one space (because we know it walked into a wall in the "repeat until" loop).

The T Ghoul

The problem with the line ghoul is that it can walk right past an opening.

To fix this, make the T Ghoul's code like the Line Ghoul's code, except make it so that each time after the ghoul takes a step inside the "repeat until" loop, and if it's not touching a blue wall, it checks to see if it can move to the either side. That is, if the ghoul is moving left or right in the main "repeat until" loop, at each step it would check for openings below and above. If the ghoul is moving up or down in the main "repeat until" loop, at each step it would check for openings to the left or right. If it finds an opening, it picks a random number from 1 to 2, and if the number is 2, it uses "stop this script". (Then out in the "forever" loop it picks another random direction, and that direction might be the direction of the opening.)

The Mean Ghoul

The Mean Ghoul is like the T Ghoul, but instead of picking a direction randomly, it picks a direction based on where the cat is. If the cat is to its left, it tries to go left. If the cat is to its right, it tries to go right. If the cat is above, it tries to go up. If the cat is below, it tries to go down.

The Life Shield

1. Make it so the Life Shield starts in a good place and shows itself when the game starts.
2. Make a variable "shields on" and set it to 0 when the game starts.
3. Make it so that when the cat touches the life shield it does a broadcast (plain "broadcast", not "broadcast and wait") of a "invoke shield" message.
4. When the cat receives "invoke shield":
   a. hides the life shield (broadcast a message to do that)
   b. sets a variable "shields on" to 1
   c. waits three seconds
   d. sets "shields on" to 0
5. In the code that checks if your ghouls are touching the cat, make it so it only checks for that if "shields on" is 0.
6. A nice variation on this is to show a countdown to the player sees it going 3, 2, 1, 0. You can use a variable that's displayed on the screen to show this countdown.