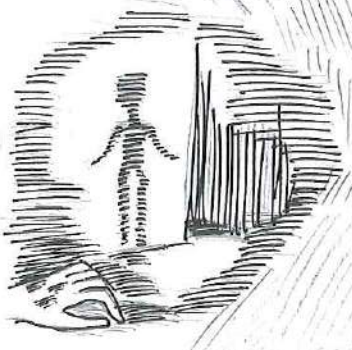
# The One-Line maze of the Apocalypse

Since the WWIII (world war three), almost a quater of the Earth got destroyed...



65% of the world population died

85% of all animals became extinct

And it had created HUNDEREDS of disasters

Caused by human, still

As two of the only few survivors after the WW III, Jesse and Karl often face difficult situations such as running out of supplies like food and medicine (before the event)

For example, on August 10th, Karl accidently scratched his arm while trying to catch the squrrel (yes somehow they didn't extinct) that was stucked on the tree in order to feed Jesse and himself since they were starving for a very long time already.

The squrrel escaped soon after....

Although the cut is now protected, But this is only tempocary...

After a quick discussion, the two decided that they should go to a place that can provide medicine supplies.

And that place, is certainly a

**HOSPITAL**

After a few minutes, Jesse led Karl to a giant Cave by Memory!

Jesse explained to Karl, her parents met each other because her father accidently discovered her mother doing experiments while travelling

Karl wanted to go in right away, however, Jesse stopped him...

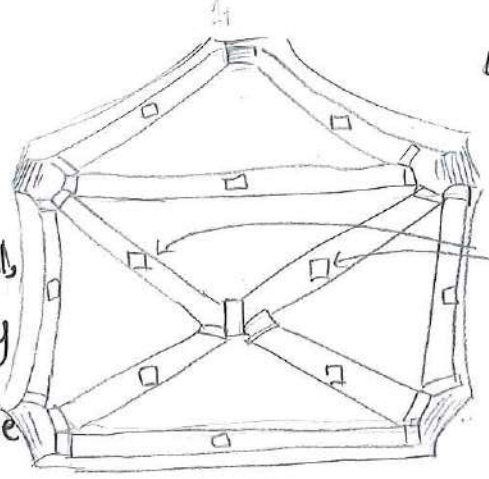
I've been to this place before so I know...

Jesse: This is the basic shape of this cave!

Karl: So... it's like a pentagon?

Jesse:

More than that...



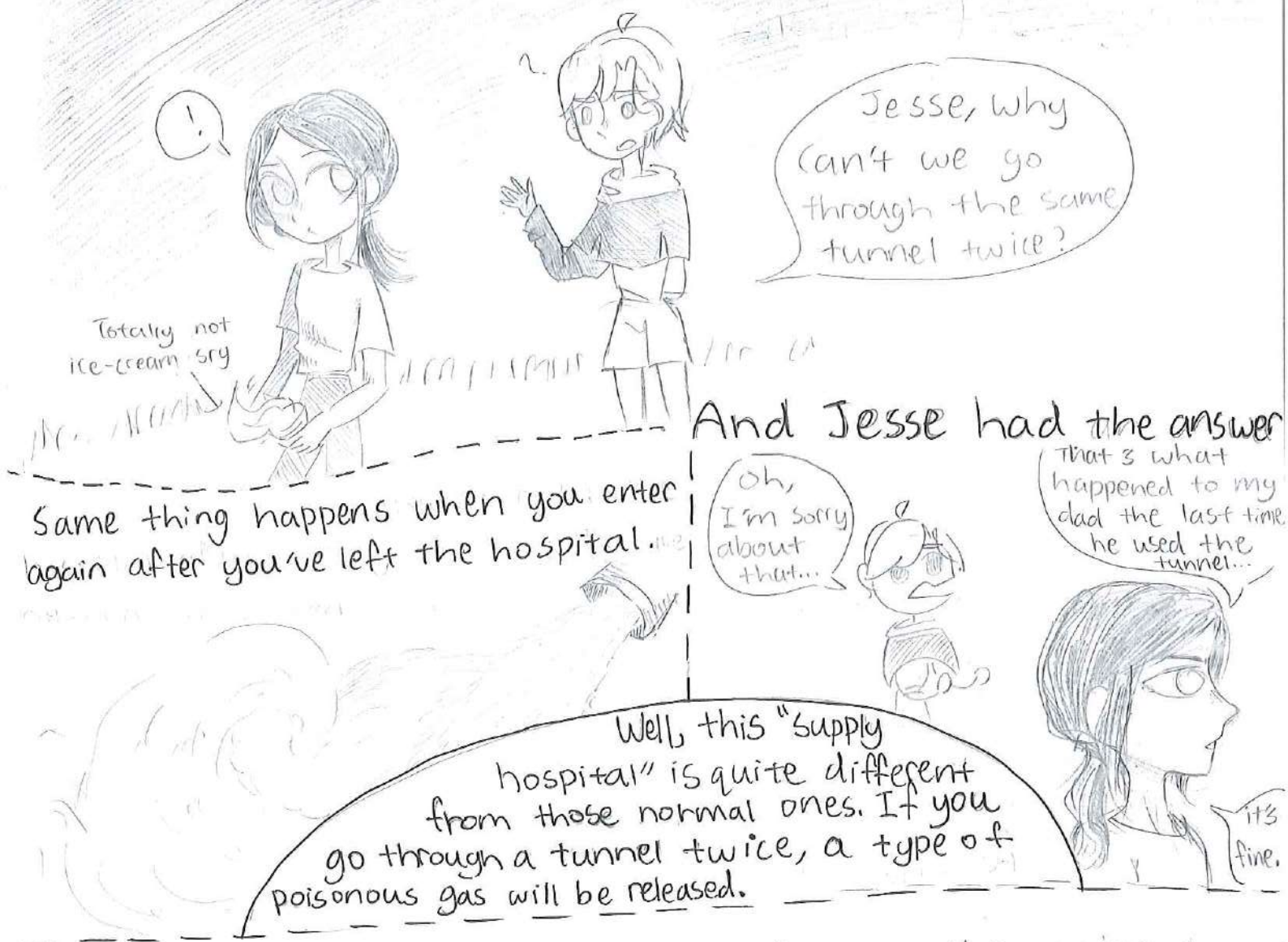

Jesse: There is a maze inside this cave hospital, AND there are emergency supply box in EVERY single tunnel.

Karl: You mean the supply hospital?
Then why don't we just go in here from one of the cave entrance and get out from another when we get enough supplies?

Jesse: No! The rules are:

1. go through the maze only ONE time
2. Get all the supplies (go through every tunnel)
3. Do not go through the cave entrance more than TWICE (one to exit one to enter)

Karl had a question...

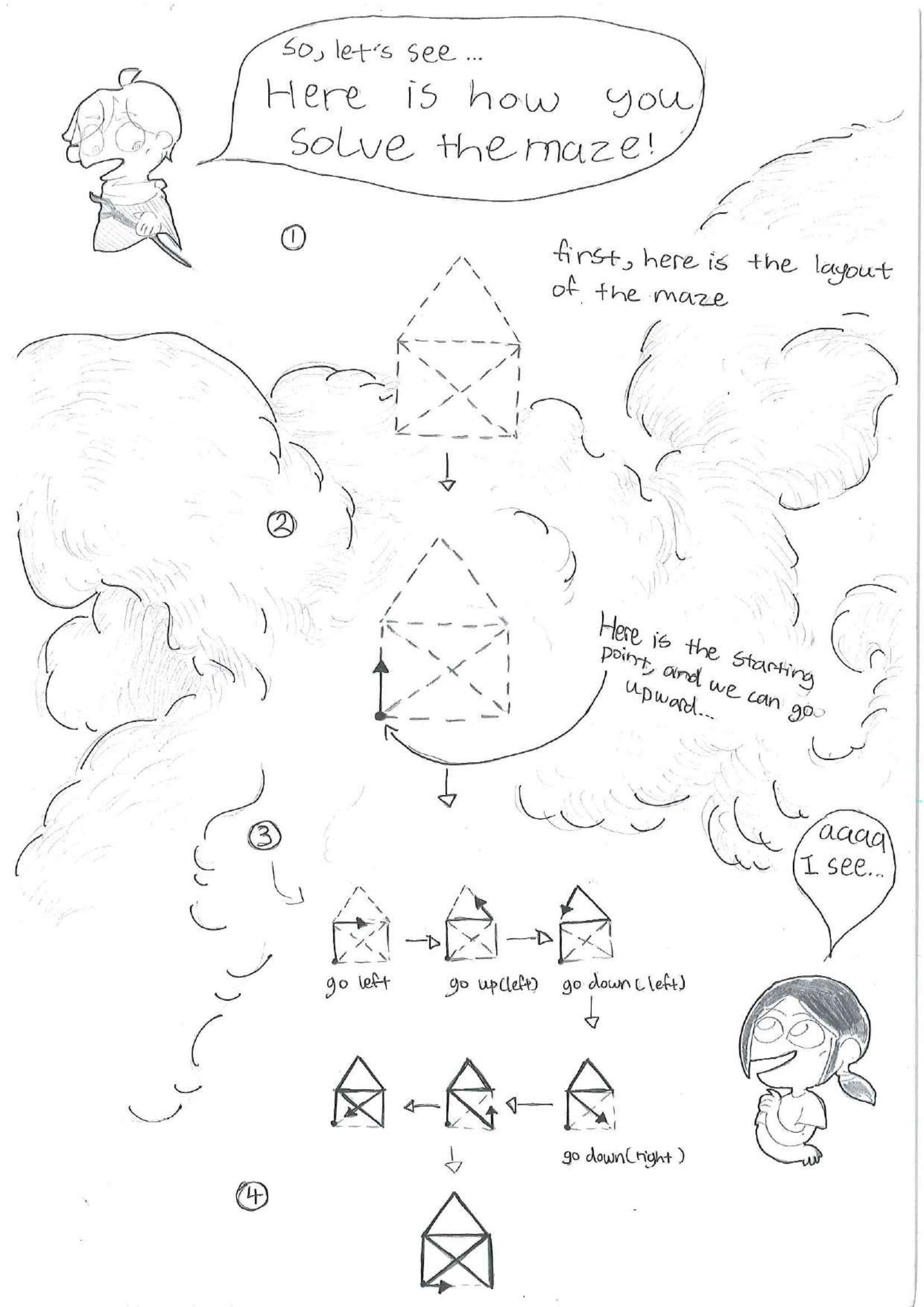



Same thing happens when you enter again after you've left the hospital.

And Jesse had the answer




Jesse pointed out the real problem, how are they going to get all the emergency supply boxes crossing each tunnel exactly once? Fortunatly, Karl quickly cam up with a solution.


So, let's see...
Here is how you solve the maze!
①
first, here is the layout of the maze
②
Here is the starting point, and we can go upward...
③
aaaa I see..
go left
go up(left)
go down(left)
go down(right)
④

Jesse thought it's now done.

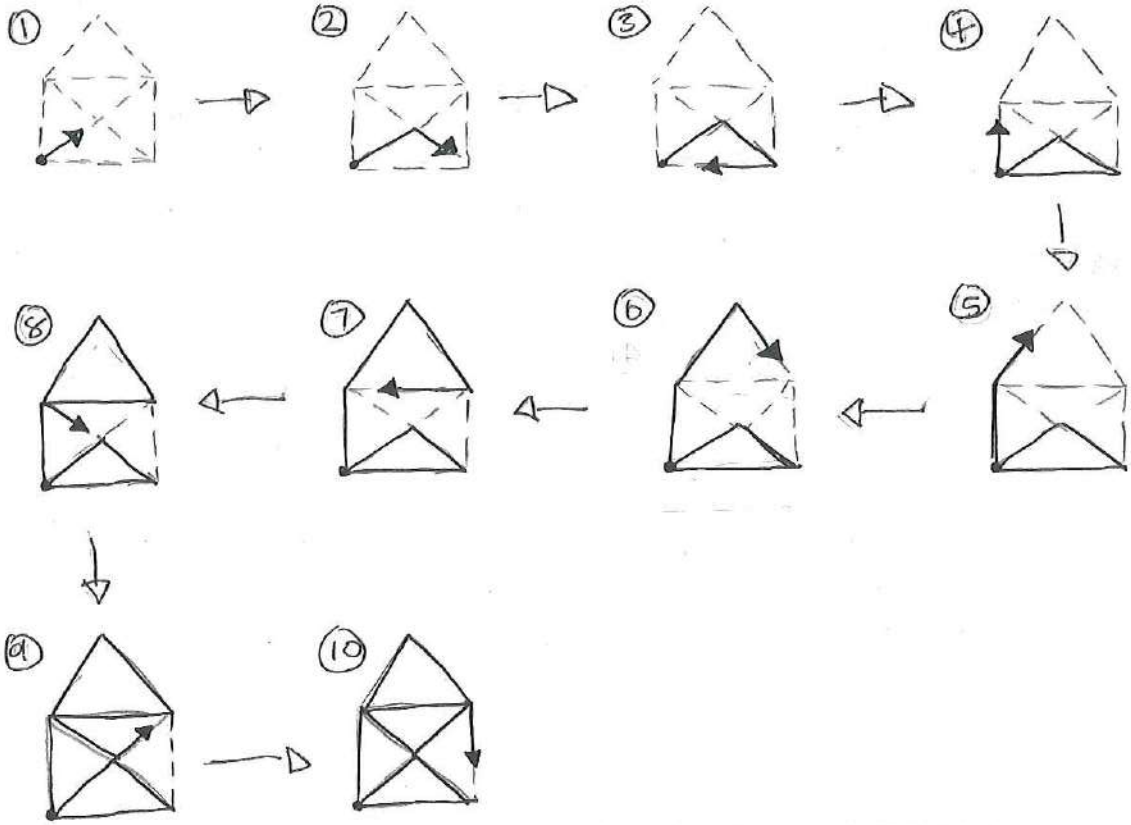
Okay... so this is one possible path to go...

But Karl thought of a new solution

There's another actually...

But I don't know if it's going to make any difference...

Karl: It's simple, just use another route:




Yea... it's like that, but I don't think it's going to be any different from the first route.

Well... Karl there is difference!

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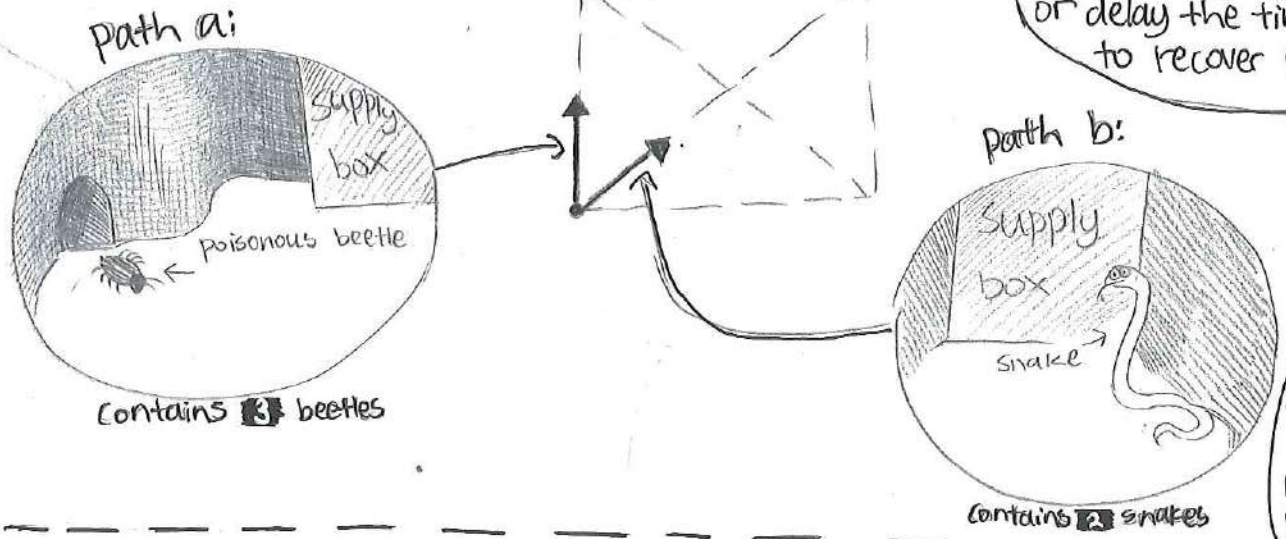
Jesse explained:

In the both starting tunnel, there are some obstacles.

(my parents used to use them as experiment pets or whatever)

Jesse: The thig is, if we meet any of the obstacles (snake / beetle), we either going to be harmed or delay the time for you to recover your wound




(oh wow you remembered that)

Karl: Okay, so we'll choose the path that's more likely to be empty :/

Karl thought about it for a few seconds, then he quickly pointed out the solution!

**Path a:**

Karl: here are the probability of us meeting the beetles:

X = no beetles

beetle #1, b#2, b#3

three possible outcomes: A, B, C

possible outcomes:

1) (A, B, C,) ← all beetles are active
2) (A, B, X) ← only two beetles are active
3) (A, X, C)
4) (X, B, C)
5) (A, X, X) ← only one beetle is active
6) (X, B, X)
7) (X, X, C)
8) (X, X, X) → no beetles

8 outcomes → 1/8 → 12.5% to meet zero beetles in tunnel (a)

**Path b:**

Karl: ..... and here are the probability of us meeting the snakes:

X = no snaks

snake #1, snake #2

two possible outcomes: A, B

possible outcomes:

4 outcomes — 1) (A, B) ← all snakes are active; 2) (A, X) ← only one snake is active; 3) (X, B); 4) (X, X) → no snakes

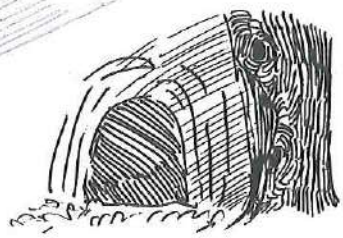
4 outcomes → 1/4 → 25% to meet zero snakes in tunnel (b)

25% > 12.5%

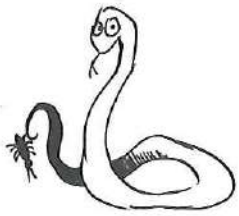
(Karl: path b is a better way to go since there is bigger chance to meet zero obstacles.

Jesse was very pleased to hear the answer, and later the two got into the cave right away.

If you knew the location of this hospital already, then why didn't you bring us here before?



How did your father died from poisonous gas if he've been here before and has incredibly good memory?



What type of experiment your mother was doing in such a SECRET place?

And the final question...:

What else didn't you tell me?

To be continued...