



# The Hillville Crisis!



By Christian Lianto

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Long Ago, there was a beautiful place called Hillville. In Hillville, there were hills placed in neat rows and columns, and on each of these hills, were houses owned by the people of Hillville, called Hillagers . But one stormy night, a huge storm came and flooded all of Hillville. In the morning, the Hillagers found that every hill in Hillville had become islands. The Hillagers panicked, and those that had boats fled to the next town over, Highville leaving trails of foamy water. This left the rest of the Hillagers stranded on their marooned grassy islands.



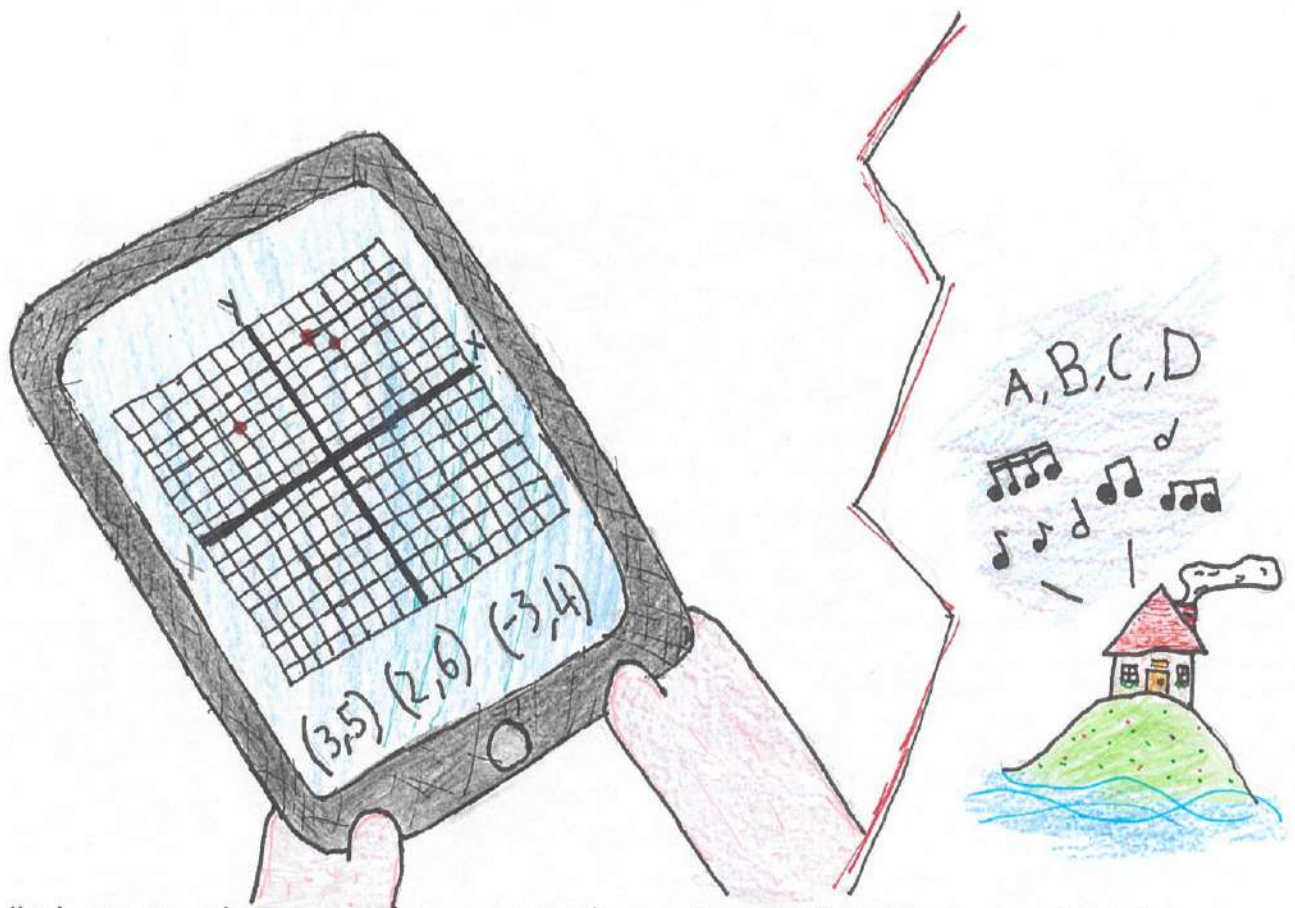
The mayor of Hillville, Mayor Bunny, decided to create a team to rescue the rest of Hillville. She quickly went on a plane to Highville, to collect some of the finest people who had left Hillville.

It took her all day, but she finally made a team consisting of Phill the Pelican, Fred the crocodile, and Jim the Giraffe. She flew them back to her office in Hillville, and gathered them into a pact room to tell them the plan. "I'll stay here in my office and you all will fly my private plane to collect the rest of our residents."



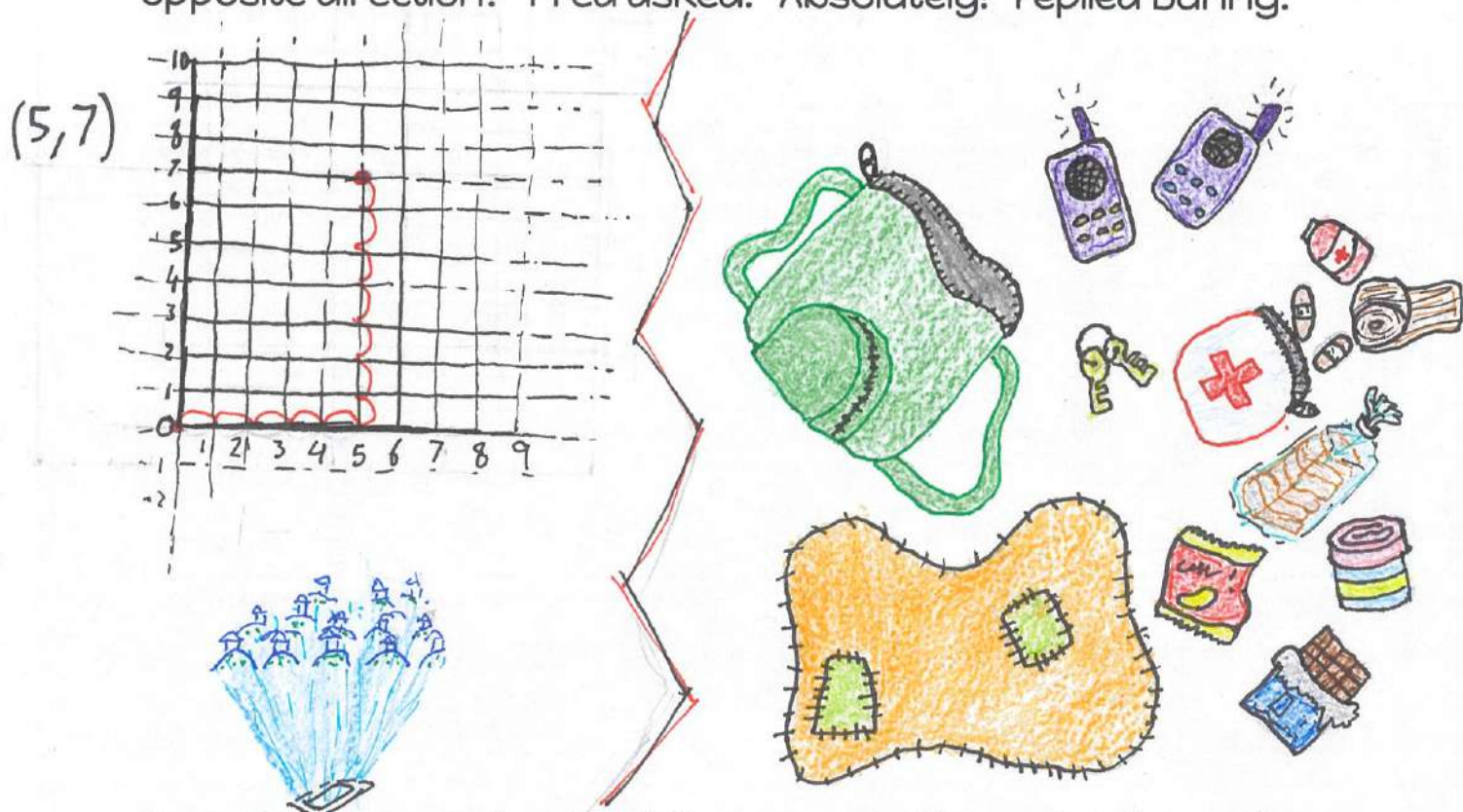
"How will we know where to go?" Jim questioned. "By using coordinates of course!" The rest of the team looked at her puzzled, "What's a coordinate?" Fred asked. "I'll teach you," Bunny said as she got out her glimmering tablet.

On the tablet's screen was a grid with a huge cross going through the middle. "These two lines going through the middle are called axes," Bunny explained. "The horizontal line is the X axis and the vertical line is the Y axis. "The centre of the two axes is point zero, and the positive numbers are on the left and on the top, while the negative numbers are on the right and on the bottom" Bunny said pointing at her tablet.



"The coordinates are a pair of numbers, the first number is instructions for the X axis and the second is for the Y axis, you can remember this by knowing that X comes before Y in the alphabet!" The room burst into song and after everyone had checked for themselves, the noise suddenly stopped.

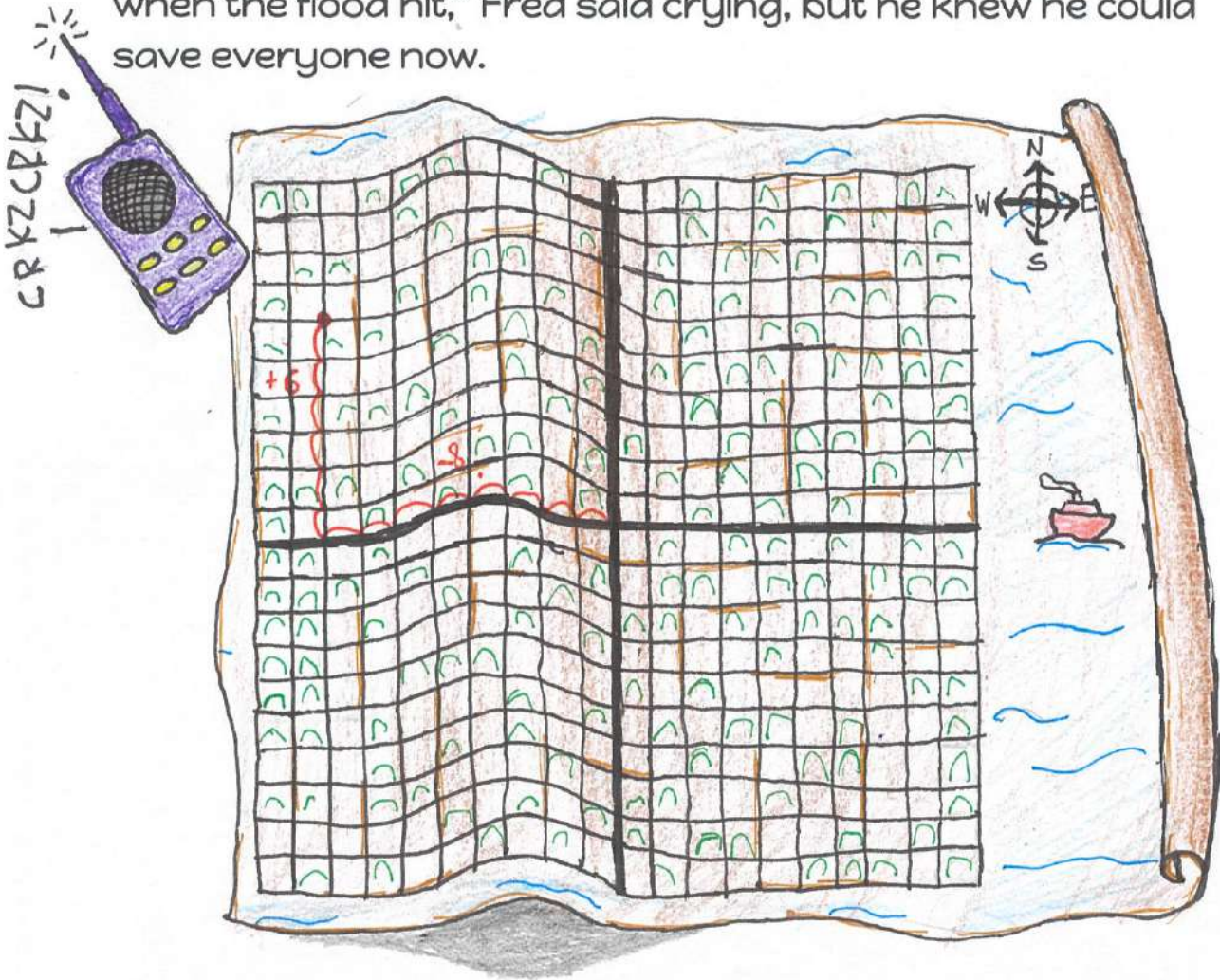
Bunny then brought out a holographic 3d map of Hillville that had a faint tinge of blue and flickered in the light. "Let's have an example" Bunny announced, "If the coordinates are (5,7), you should start from the centre, which is where my office is, and count to five going along the X axis making sure to stop at each mark. Then from that point, you count to seven going along the Y axis. This is the point (5,7)." "So does this mean that if there was a negative number, you would count in the opposite direction?" Fred asked. "Absolutely!" replied Bunny.



Once the team understood, Bunny gave them a bright red kit full of supplies. In the kit were high tech walkie talkies, first aid supplies, blankets and food for the people they rescued, the map of Hillville, and the keys to the plane. Bunny waved as she sent them on their way. "Let's go, team!" Phill yelled in excitement, as he looked back at Bunny. The engine of the plane roared, sending the team blasting into the air.



Fred sighed as he looked out the window seeing all the damage the floods had done, "I shouldn't have run away when the flood hit," Fred said crying, but he knew he could save everyone now.



CCRRKKXXZZZ was the noise everyone could hear as Fred fiddled with the walkie talkie. Bunny's voice finally came through and the team listened carefully. "Bill the Koala is at  $(-8, 6)$ , I repeat  $(-8, 6)$ ." Phill got out the map and rolled it out on the floor, "Just like we practised okay guys?" Phill said. "So if we start from the centre, and count to negative eight along the X axis, we should end up here! Then we should count up to six going along the Y axis, we end up here" Phill screamed.

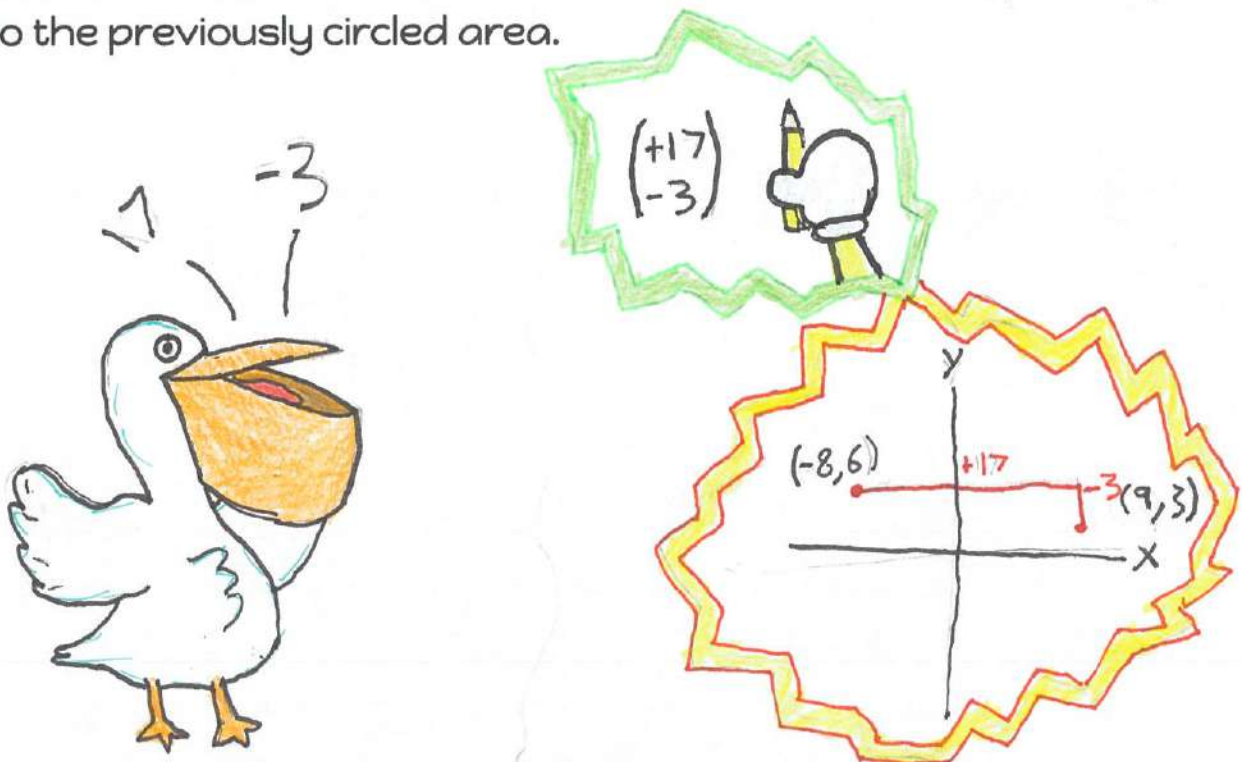
Vigorously, Phill circled a spot on the map and wrote Bill, then he gave the map to Jim who was driving the plane. As they approached the spot, they scanned the area to see if they could see Bill, and sure enough, Bill came out of his house and waved at them. They were correct.



Once they had picked him up, Bunny gave them another one, "Greg the goldfish is at (9,3)", "ROGER!" The team yelled. Through all the excitement, Jim stretched his head from the pilot's seat just so he could have a go. "If we go back to the centre, it will take too long, so how would we know where to go from here to the next stop?"

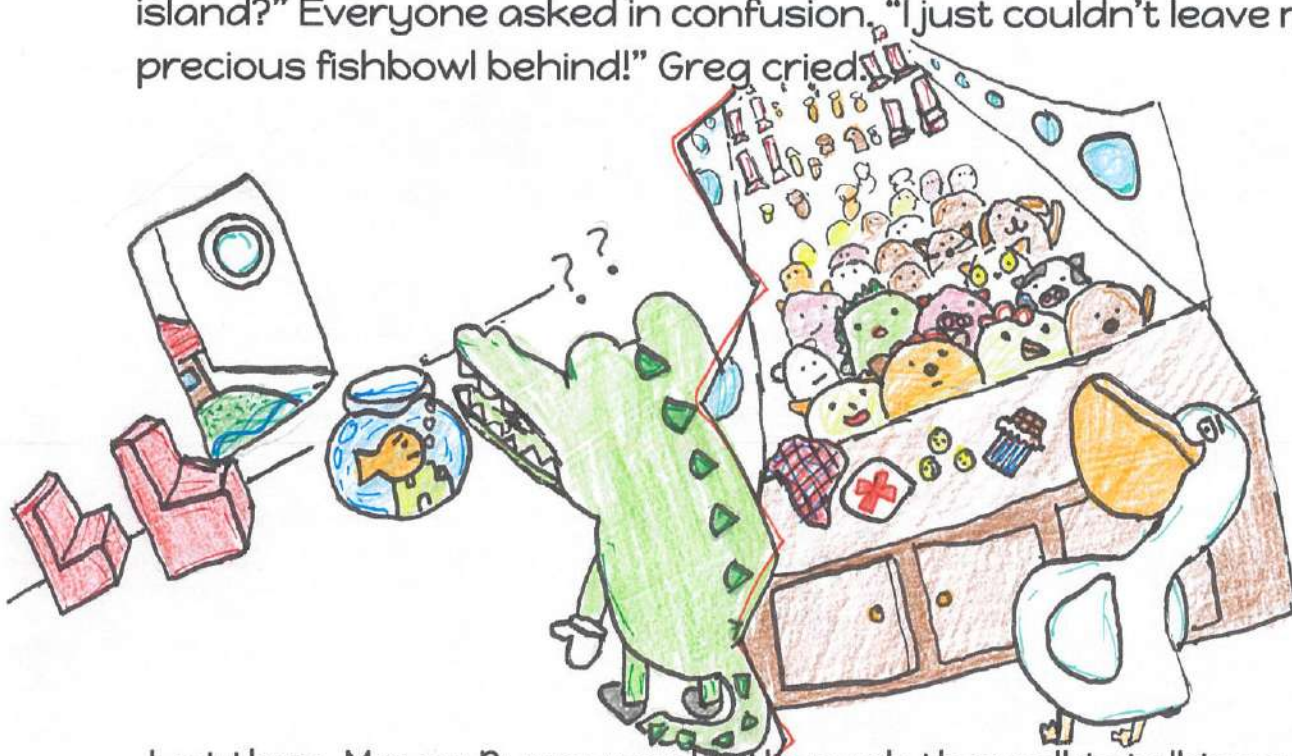


Bunny heard Jim and quickly explained, "I forgot, you need to use vectors to get from one coordinate to the other!" Luckily, Jim knew how to use vectors so he happily let Bill fly the plane while he taught. "First I have to find the coordinate, so if I start from the centre, and move nine spaces along the X axis, I land here, but then I have to count to 3 going along the Y axis, 1, 2, 3, and then I end up here! Then I should go back to my other coordinate so we can start on the vectors" Jim said, pointing to the previously circled area.



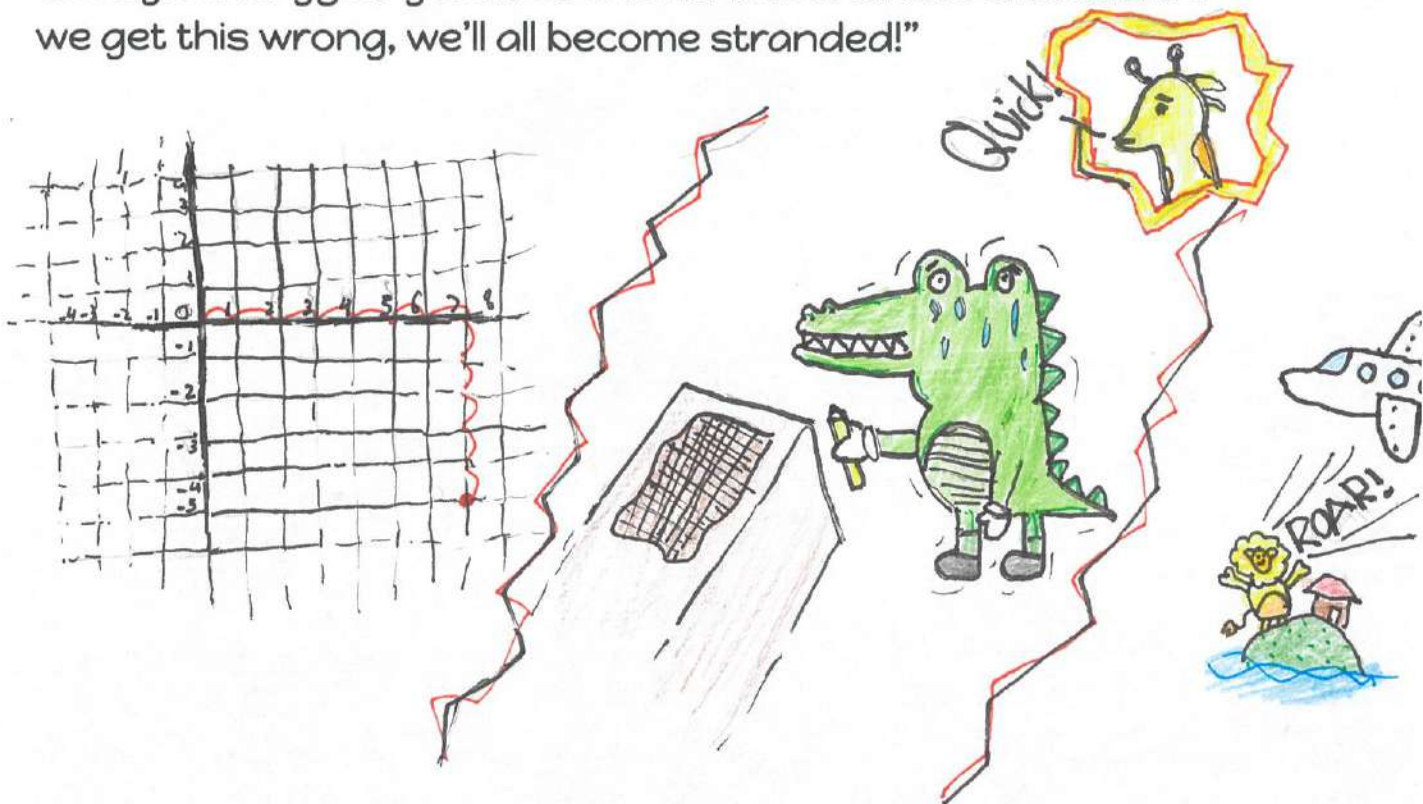
"Vectors work just like coordinates, except you don't start at the centre, you start from a different coordinate. if I start here at  $(-8, 6)$ , I should count from  $-8$  until I get to  $9$ ." "The answer is  $17$ , I counted to  $17$ !!!" Phill said as he was about to explode. "That's right!" Jim said. "Then we write  $+17$  here and count from six until we reach three, using the next part of the coordinate." "It's negative three!!" Phill said, interrupting again. Jim wrote down  $-3$  right under the  $+17$  and put brackets around them.

“This is the vector, and it shows us that we have to move seventeen spaces along the X axis, and then negative three spaces along the Y axis from the previous coordinate.” Jim said, reclaiming his pilot's seat. Jim looked at the vector and started to fly, counting how many hills he passed. When they reached the spot, they could hear a faint yell, they had got the vector and coordinate right. They picked up Greg and started to look puzzled.” Why didn't you just swim off your island?” Everyone asked in confusion. “I just couldn't leave my precious fishbowl behind!” Greg cried.



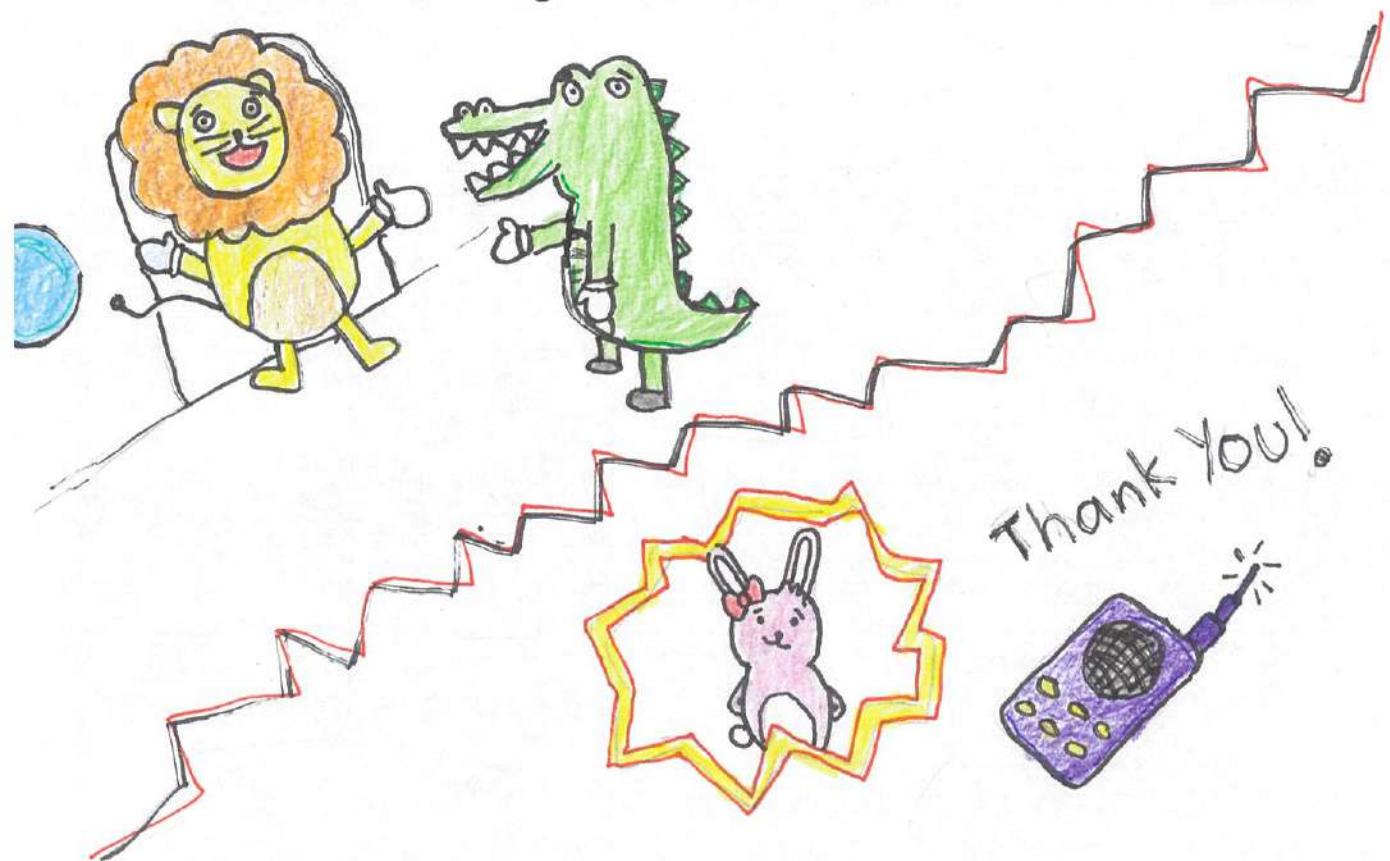
Just then, Mayor Bunny spoke through the walkie talkie again in a lively voice, “Jimbo the cat is next, I'm sending the coordinates now!” The team whizzed through the next coordinates, packing their plane with people. Phill had declared himself caregiver and got to work giving the passengers warm blankets and food, and Jim couldn't look back anymore because he had almost crashed the plane three times!

As the sun began to set and the stars started to sparkle, Bunny read aloud the last coordinate, "Randy the lion is at (7,-5), last one, let's do this." But as they got excited, Jim started to panic. "We're almost out of fuel! We only have enough energy to get us to the next coordinate and back. If we get this wrong, we'll all become stranded!"



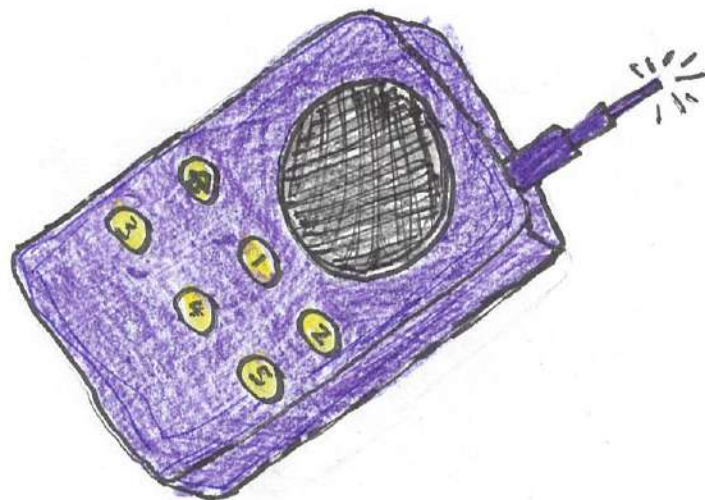
Everyone looked at Fred, it was all up to him. He placed his finger on the centre and counted to 7 going along the X axis, unsure if he was doing it correctly. He started to shake and sweat and his nerves were getting to him, but he knew he could do it. He started counting backwards from zero until he reached negative five, and stopped his finger. Was it right? As he passed it unwillingly to Phill, the engine started and they were already off the ground. As they got closer and closer, Fred started to panic. But as he looked out the window, Randy was down below giving them a mighty roar. He had done it.

The plane erupted in noise as the Hillagers cheered and helped Randy onto the plane. Fred started to get his confidence back and started on the vector, "If I start from here,  $(7, -5)$  and need to get to  $(0, 0)$ , Bunny's office, I should count from seven until I reach zero, which means I count to negative seven, then I should count from negative five until I reach zero, which means I count to five!" He wrote down the vector,  $(-7, 5)$  and gave it to Jim. He was sure it was correct.



A huge party started but soon later, the plane returned to silence as the moon shone through the translucent windows. As the plane slowly glided across the night sky, Fred sighed in relief, it was over. He looked around knowing everyone was safe and gave a small smile. Slowly, he got out his walkie talkie, and softly spoke into the speaker, "Thanks Bunny, thanks for everything."

When all of Hillville gets flooded, it's up to Mayor Bunny and her team of animal recruits to rescue the rest of Hillville using the power of coordinates and vectors. With limited resources, it's a race against time to save all of Hillville.



## About The Author

My name is Christian Lianto and I am 12 years old. I am from Bucklands Beach Intermediate in New Zealand and enjoy maths, art, and reading. Sometimes I also like to write and believe that creativity is the key to a great story.