



THE 2022 YOUNG MATHEMATICAL STORY AUTHOR (YMSA) COMPETITION

**THE STUART J. MURPHY AWARD
(THE 8-11 YEARS OLD CATEGORY)**

SHORTLISTED

**'A Swashbuckling Adventure!' by Michael Asimacopoulos (10 years old)
at The Hall School (UK)**

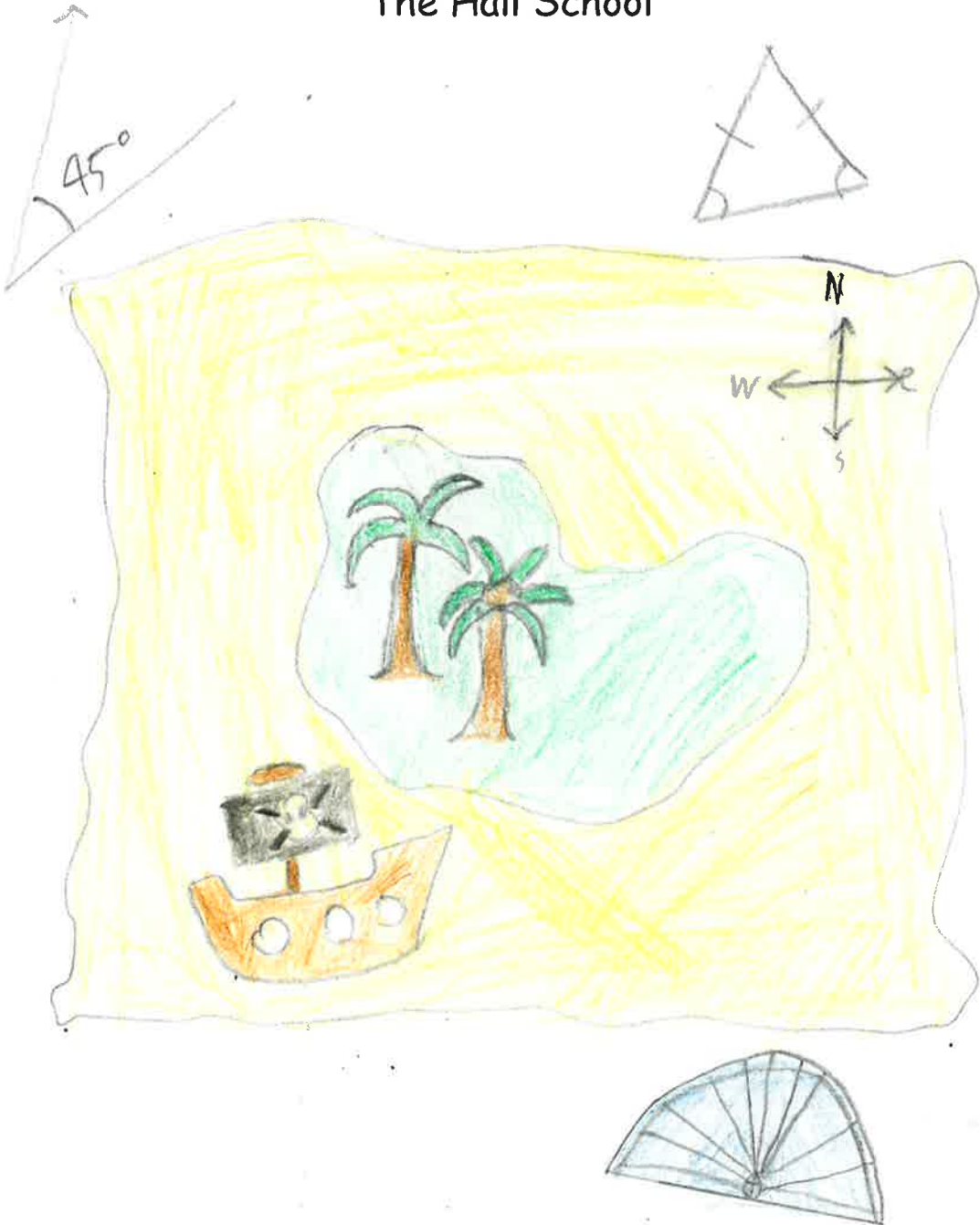
You can read the author's inspiration for the story and the judges' comments
on:

www.mathsthroughstories.org/ymsa2022

#YMSAMaths

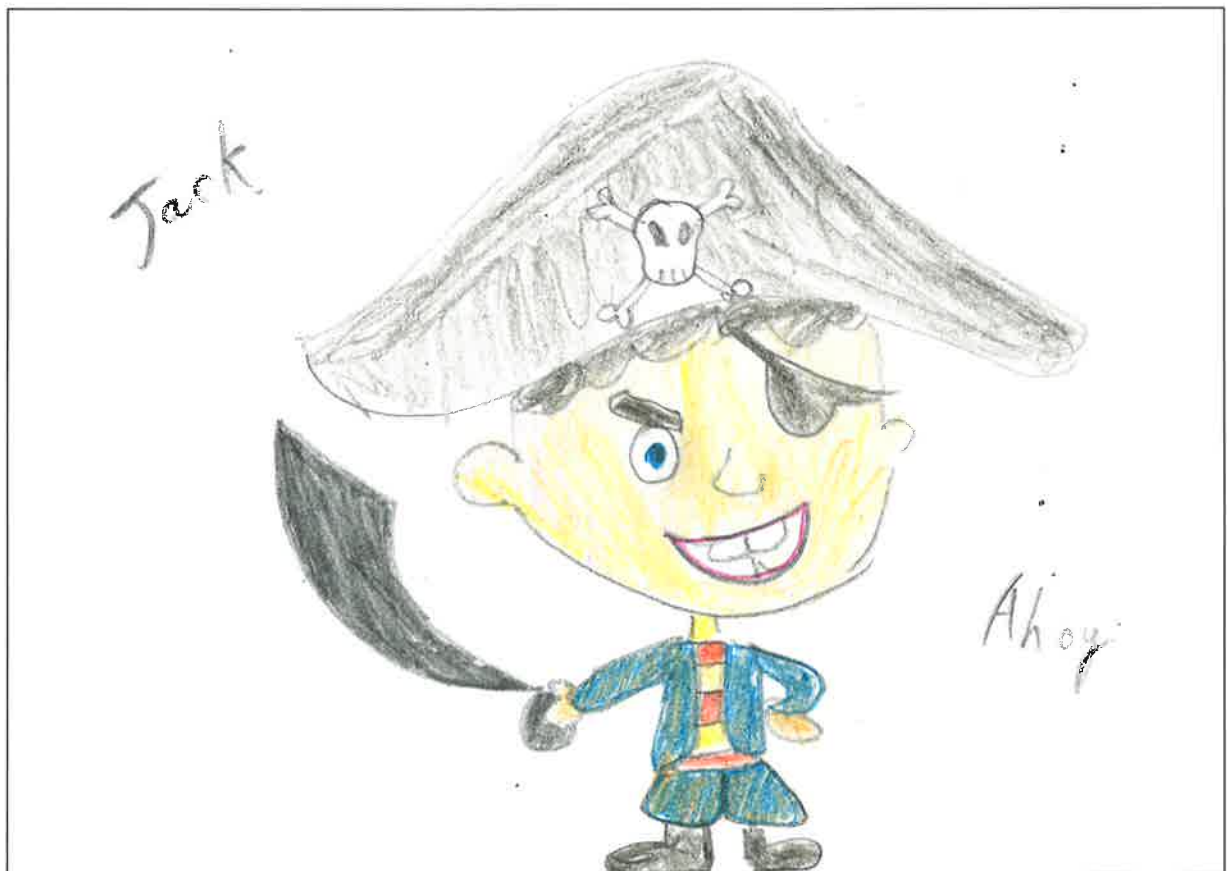
A Swashbuckling Adventure!

By Michael Asimacopoulos
The Hall School



Let me introduce myself. My name is Jack and I'm a pirate. Well, sort of a pirate. I come from a long line of pirates, but I've never actually found gold yet. I grew up on my dad's well weathered pirate ship. He tells me that we're descended from Captain Blackbeard, the fearsome ruler of the seas.

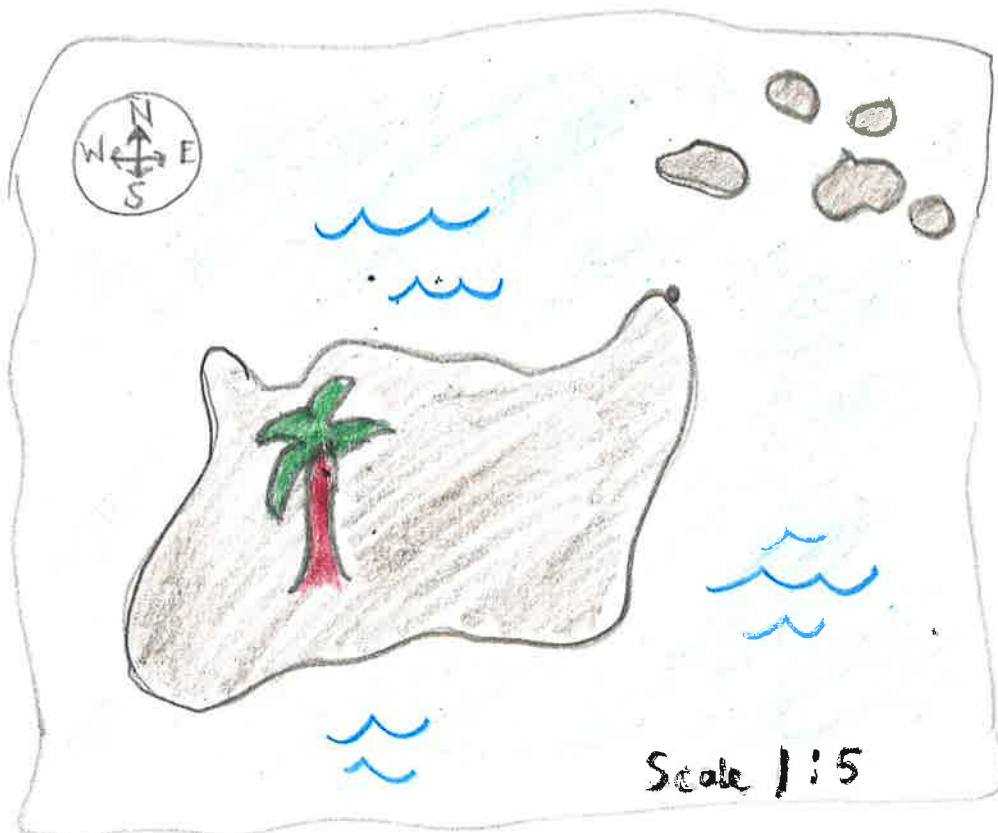
I have felt pirate blood running through my veins from as young as I can remember, and nothing would make me happier than to find treasure. My pirate ship, the Conqueror, is ready, and I have a crew of 6 men ready at the helm. All I need now is a treasure map.



The funny thing is that I had all but given up hope until one day when I was sitting on the beach, a glass cylindrical bottle washed up on the shore right before me. Inside was a crumpled-up piece of paper, with some markings on it. It was a map, a treasure map!

I was so excited; my time had come! I gathered everything I thought I would need for this exciting trip. I was about to set sail when suddenly, I remembered that I might need my trusty sword: a scimitar sword (that had been a gift for my 15th birthday), for the adventure ahead with my fellow men. I bolted to get it, and soon after, my pirate ship was leaving the old wooden harbour. I grabbed the map and studied it with curiosity, the scale was 1cm:5km, and had a bunch of islands on it. But that was it, there was no "X marks the spot".

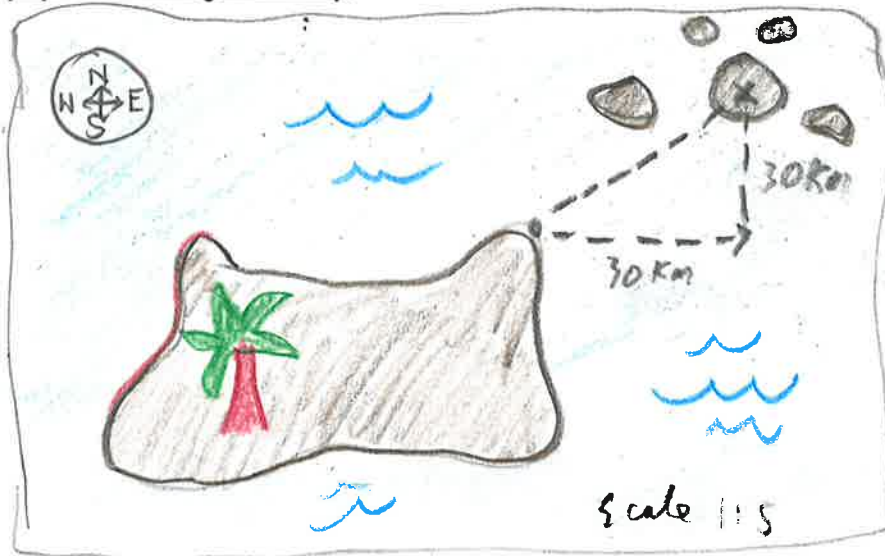
Map



Interestingly, there were some words scrawled at the bottom of the map. It read:

1. Your journey starts at the very North-East tip of the island.
2. On the map, travel in the East direction for 30 km.
3. Once you have done this, rotate 90 degrees anticlockwise for another 30 km.
4. The treasure is hidden at this point.
5. The combination code is a 6 digit number made up of the individual angles in the triangle. The triangle we are talking about is the one formed from your journey. The sides of your triangle are given by the original 2 legs of your journey as well as the distance between your starting point and your final destination.

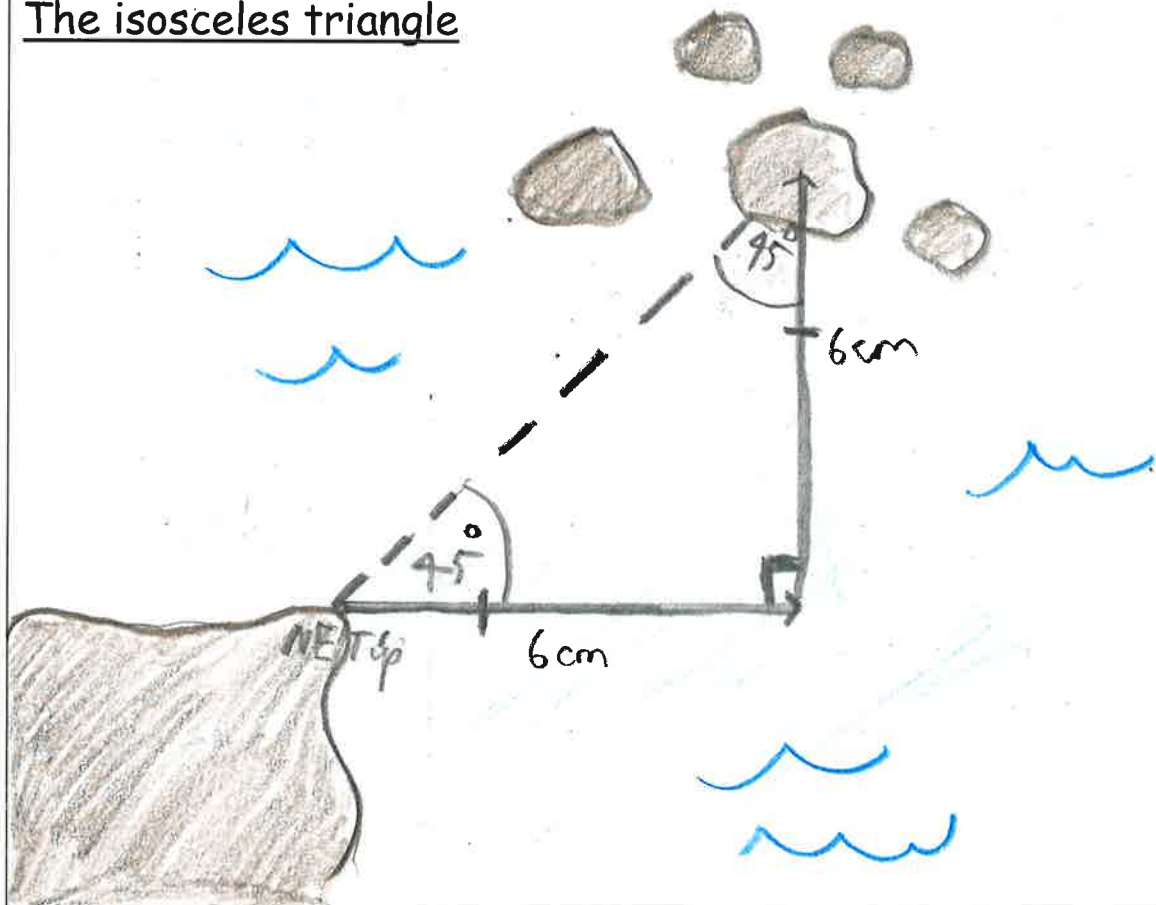
Map of my planned journey



I decided to get to work and draw out the key points. I realised that the triangle mentioned was an isosceles triangle. Using my maths knowledge, I soon figured out that given the angles opposite equal sides are equal as well as the fact that all angles in a triangle add up to 180 degrees, I had my combination.

All I needed to do now was to set sail and find this treasure.

The isosceles triangle



I quickly calculated that my final destination was 6cm to the East and then another 6cm to the North.

Given one of the angles was a right angle of 90 degrees and also the fact that it was an isosceles, the other 2 angles were 45 degrees each.

We sailed swiftly according to the instructions and although some of my men were sea sick from the rough seas, we landed on the island in one piece.

After a long day of digging, we finally discovered an old wooden chest that was very heavy indeed. There was a combination lock that appeared to be untouched and intact. Worryingly, it seemed to the naked eye to be very difficult to crack.

But not to worry! Armed with my knowledge of what those three angles might be, I tried 454590, 459045 and finally 904545 did the trick. Low and behold, the lock opened and there was an almighty roar and cheering as we unlocked the treasure chest!

Inside were thousands of golden protractors! We had found our treasure!



BLURB

Using his supreme knowledge of triangles and angles, Jack embarks on an adventure on the high seas to a destination where his dreams of mathematical riches will come true.

ABOUT THE AUTHOR



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Lover of all things mathematical
And gold and X marks the spot!