

# PRIME SUSPECTS

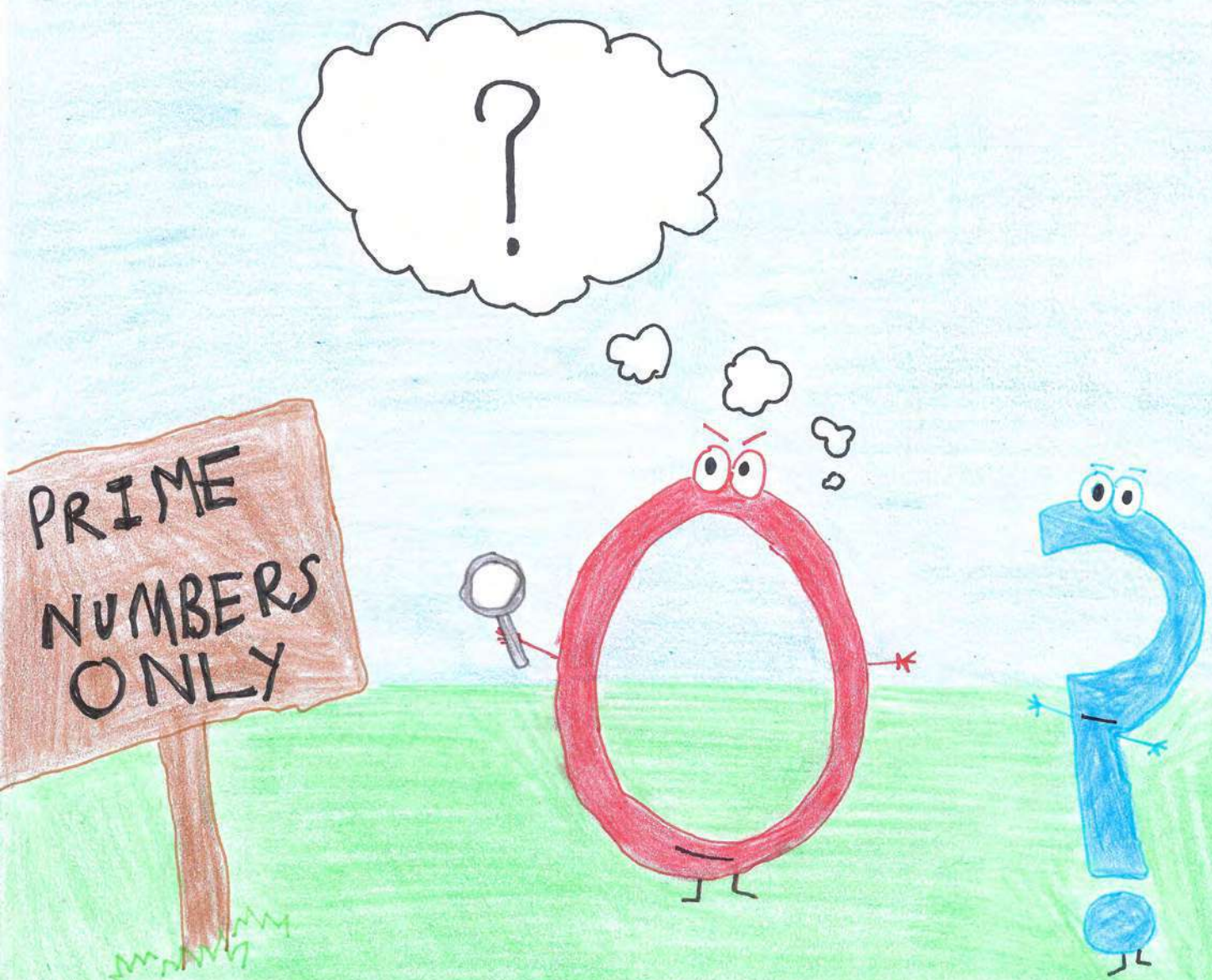


Written and illustrated by George Smith

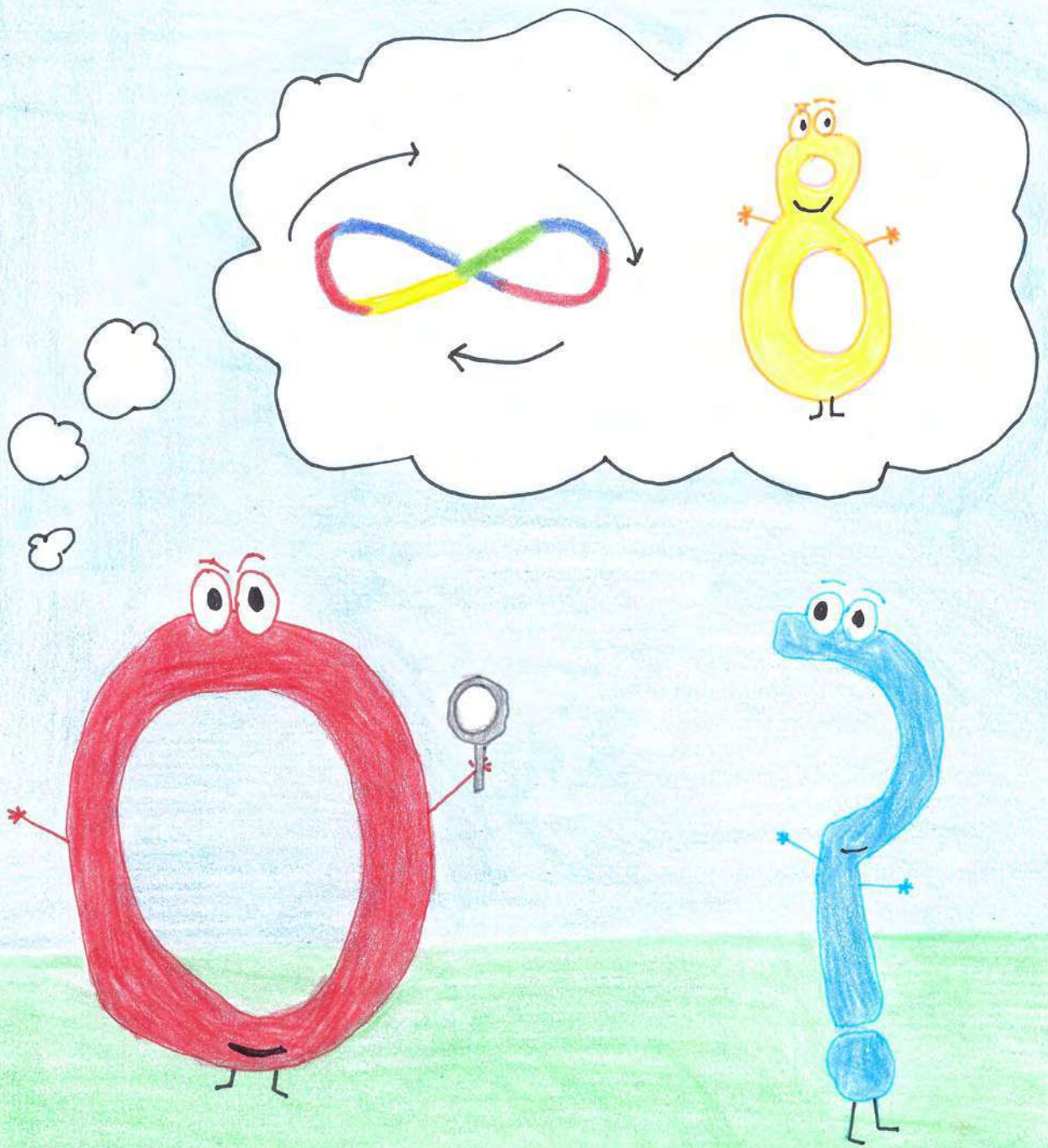


In a tropical island the beautiful Infinity Temple lies. Detective Zero receives a call, the precious Infinity Statue has been stolen in the night!

Detective Zero and Assistant Clue leave immediately for the temple.



On arriving at the temple they discover that only PRIME numbers can enter the temple, but Detective Zero is convinced that he knows who the thief is...

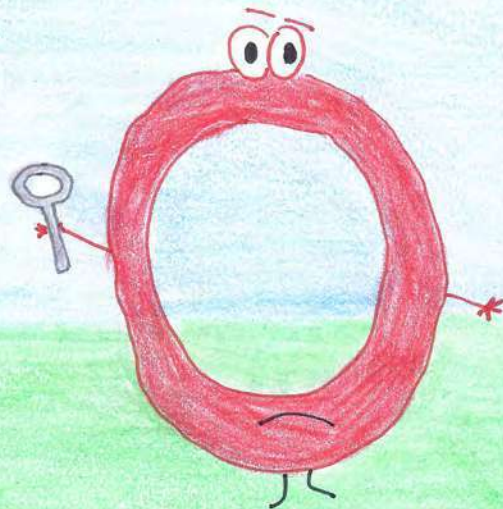


"I think the thief is 8, it is a mischievous little number and it could easily disguise the Infinity Statue by turning it on its side," announced Detective Zero.

$$8 \div 2 = 4 \quad 8 \div 4 = 2$$

$$8 \div 1 = 8 \quad 8 \div 8 = 1$$

8 is NOT PRIME



Noticing the sign Assistant Clue helpfully points out, "8 is **not** PRIME Detective, it is divisible by two and four as well as one and eight."

Detective Zero looked confused, "So what makes a PRIME number PRIME?"

"A PRIME number can only be divided by one and itself, like **7** or **23**," Assistant Clue replied.

# PRIME NUMBERS...

$$3 \div 1 = 3$$
$$3 \div 3 = 1$$

3 ✓

$$19 \div 1 = 19$$
$$19 \div 19 = 1$$

19 ✓

$$89 \div 1 = 89$$
$$89 \div 89 = 1$$

89 ✓

$$37 \div 1 = 37$$
$$37 \div 37 = 1$$

37 ✓

$$53 \div 1 = 53$$
$$53 \div 53 = 1$$

53 ✓

$$5 \div 1 = 5$$
$$5 \div 5 = 1$$

5 ✓

$$31 \div 1 = 31$$
$$31 \div 31 = 1$$

31 ✓

$$97 \div 1 = 97$$
$$97 \div 97 = 1$$

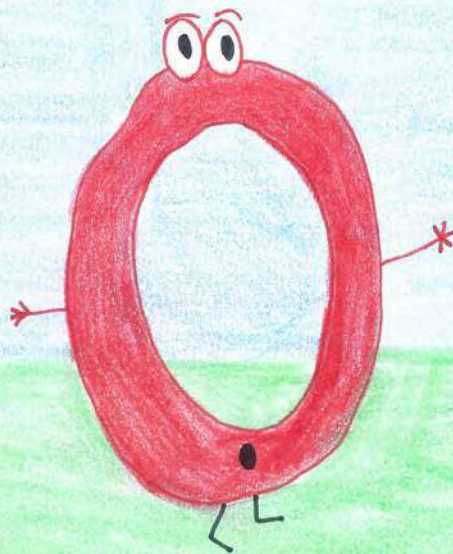
97 ✓

$$71 \div 1 = 71$$
$$71 \div 71 = 1$$

71 ✓

$$61 \div 1 = 61$$
$$61 \div 61 = 1$$

61 ✓



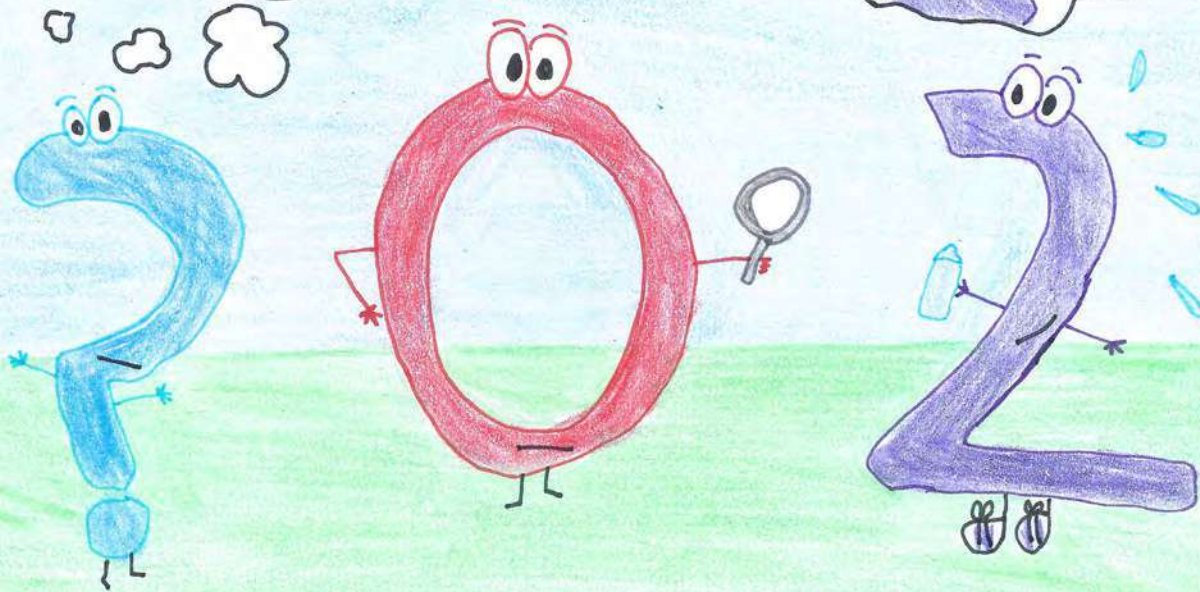
"So... a PRIME number is a number that is ONLY divisible by one and itself," repeated Detective Zero slowly.

"So... it can't be 2," says Detective Zero as 2 jogs by, "because 2 is even..."

"No, 2 is special, 2 is divisible by only one and two, so it is a PRIME, but all the other PRIME numbers are odd." replied Assistant Clue.

$2 \div 1 = 2$  ✓  
 $2 \div 2 = 1$  ✓  
2 IS PRIME

NOT GUILTY  
zzzzzz

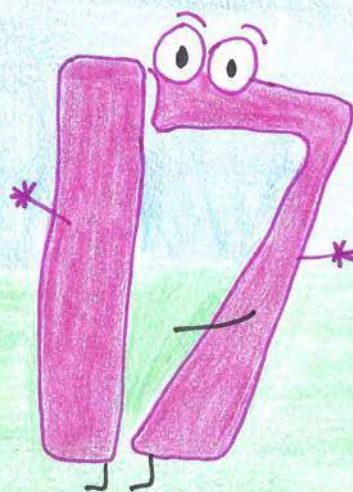
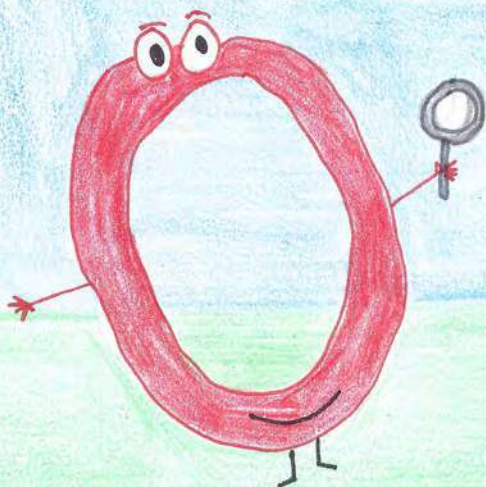
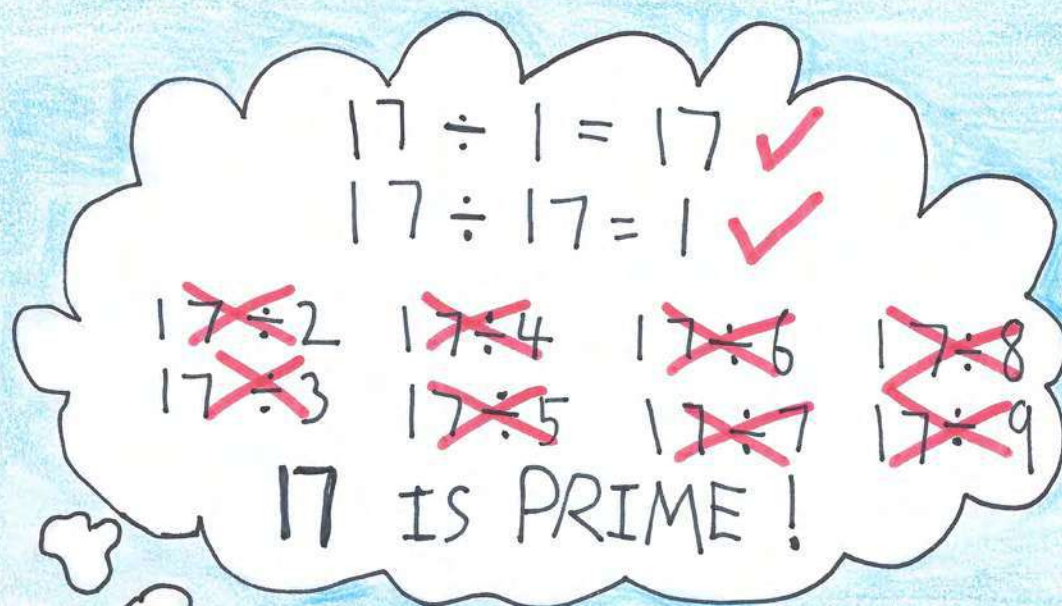


"So 2, where were you last night?" asked Detective Zero.

2 smiles, "I was in bed at home, but I have proof."

2 shows CCTV footage from his bedroom, it was definitely asleep all night.

Walking on through the island Detective Zero and Assistant Clue meet with 17, after a quick calculation in his head Detective Zero excitedly calls out; "We know it was you, where is the statue?"

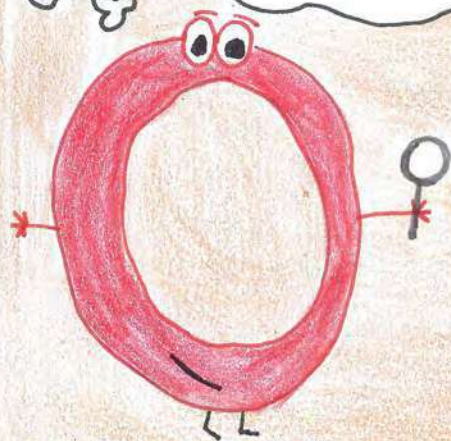


"It wasn't me, I love the Infinity Statue and would never steal it," exclaimed 17, "besides I was away on the North Shore visiting 34, you can check where I was."



Arriving at the beach, Detective Zero and Assistant Clue see many numbers chilling out in the sand, but one stood out... **11** was spotting a new pair of glasses, curved in a continuous pair of loops they looked really weird. After a quick calculation Detective Zero knew **11** was PRIME...

$11 \div 1 = 11$  ✓  $11 \div 11 = 1$  ✓  
 ~~$11 \div 2$~~   ~~$11 \div 4$~~   ~~$11 \div 6$~~   ~~$11 \div 8$~~   
 ~~$11 \div 3$~~   ~~$11 \div 5$~~   ~~$11 \div 7$~~   ~~$11 \div 9$~~   
**11 IS PRIME!**



6

13

12

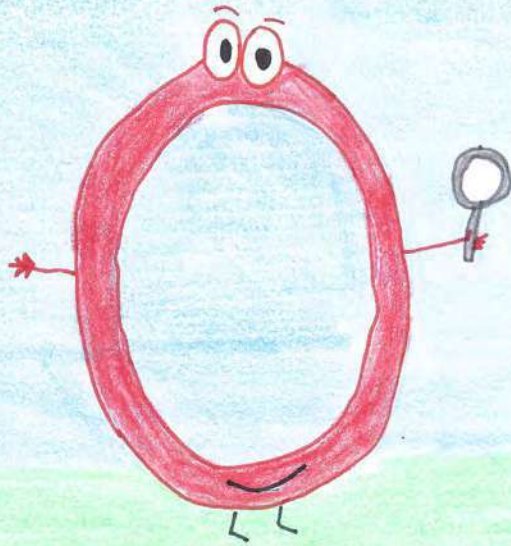
7

75

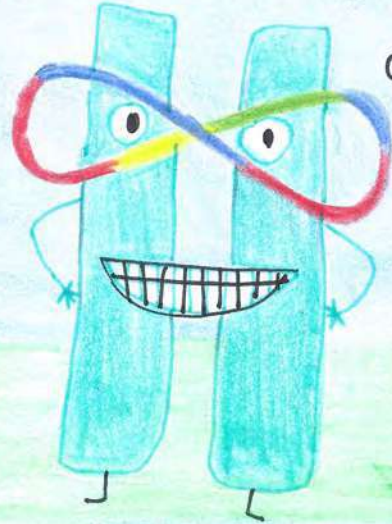
**88** was lying nearby;  
"Does **11** have eyesight problems?" asked Detective Zero.

"No," replied **88**, "**11** has perfect eyesight, I should know as I am the island optician!"

"11, give it up, you have no need for glasses, that is the Infinity Statue you stole from the temple last night AND YOU ARE NOW THE PRIME SUSPECT!



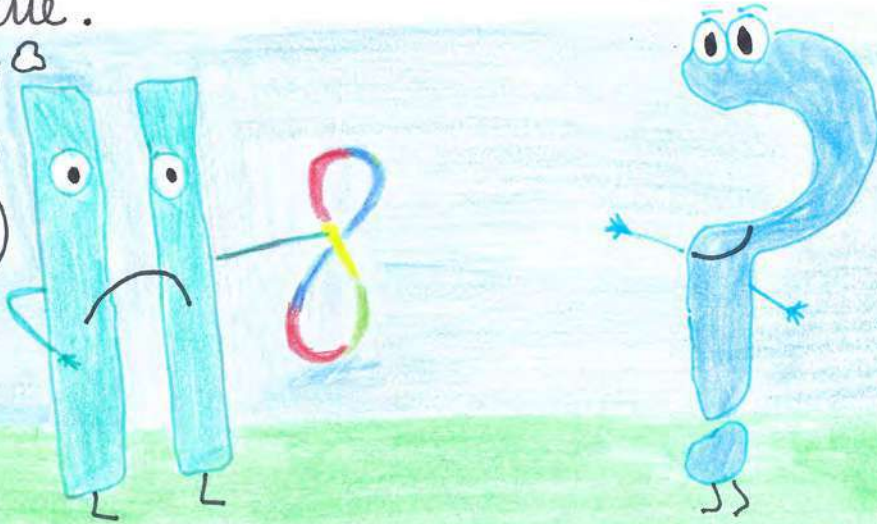
HOW DID THEY KNOW?



"You are under arrest," declared Detective Zero.

"Take 11 away, Assistant Clue, but first hand over the statue."

I thought I'd gotten away with it.



The statue was returned to the temple and all the other PRIME numbers celebrated with a PRIMETASTIC party on the beach. They invited all the other numbers to join the celebration.

**THE END**

# DETECTIVE ZERO'S NOTEBOOK

What makes a PRIME number a PRIME?

→ A PRIME number can only be equally divided by one and itself.

→ 2 is divisible by one and two - it is the only PRIME that is even

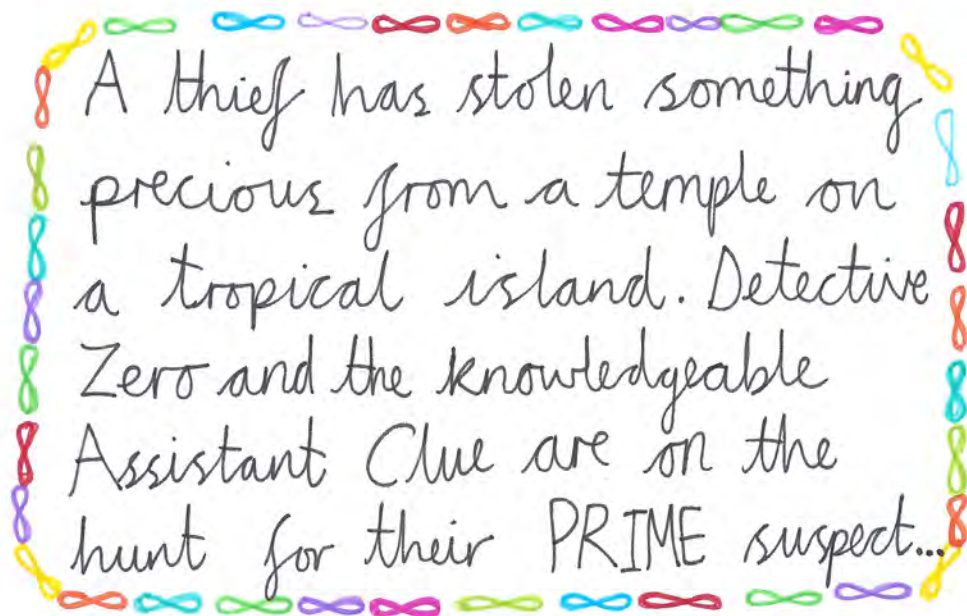
→ All the other PRIME numbers are odd

→ 1 is not PRIME

THE PRIME SQUARE 1-100

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

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A thief has stolen something precious from a temple on a tropical island. Detective Zero and the knowledgeable Assistant Clue are on the hunt for their PRIME suspect...

The inspiration for my mathematical story came from the lessons we had on prime numbers with our teacher Mr Creal. In one of the lessons we had to find a treasure trail by working out the Prime numbers. This inspired me to place my story on a tropical island. I also like mystery stories so I decided to make the main character a detective who needs to understand the concept of working out prime numbers so he can solve the crime. I really enjoyed using creative writing and illustrations to explain the mathematical concept and I hope my story will help readers remember how to work out if a number is prime or not.