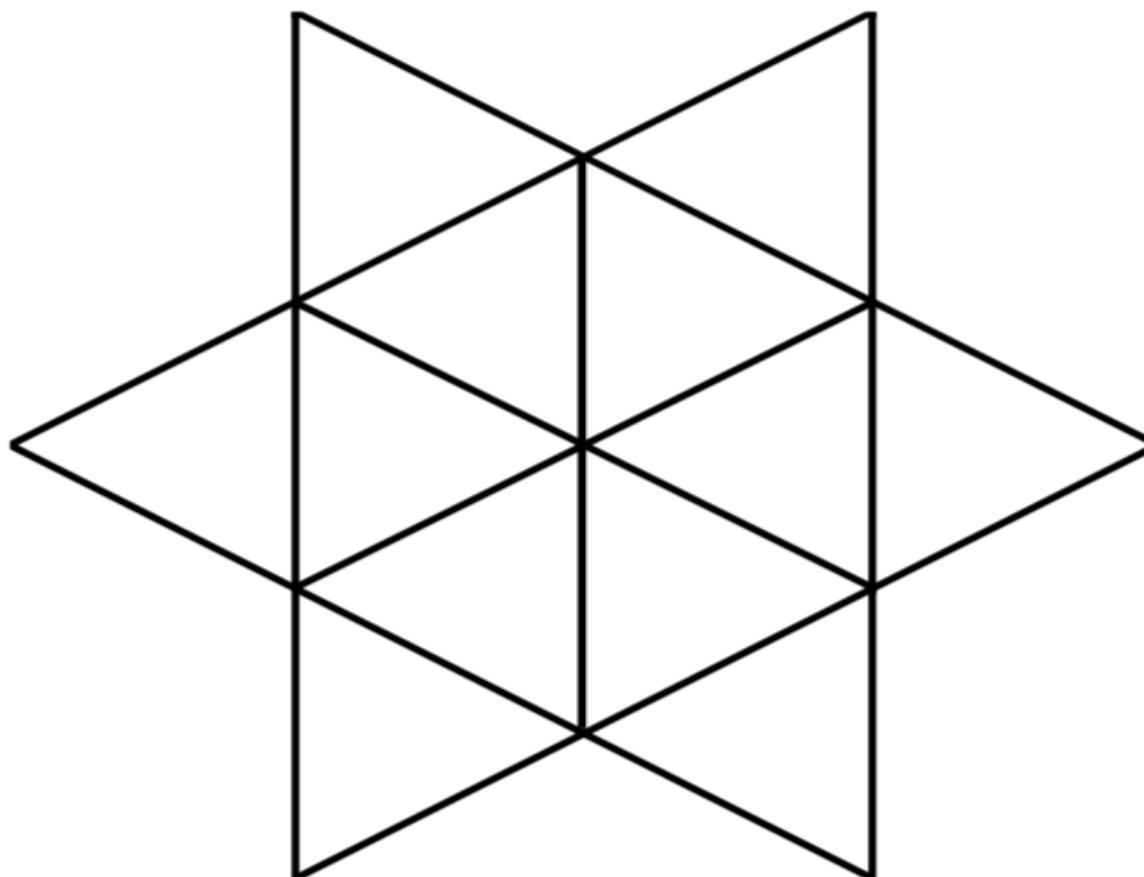


Starter

How many triangles can you see in this picture?



Mild

The Mystery at the Grand Portrait Gallery

The pupils of Masters Academy are going on a school trip to the Grand Portrait Gallery. They have been studying famous artists and are excited at the thought of seeing their favourite and most famous portraits at the gallery.

When they arrive, they are led into the reception area where they are counted twice for good measure and then told which groups they are in.

However, disaster has struck! Some budding artist has sneaked away from the group and, with their felt tip pen, drawn moustaches on all the portraits!

Your task is to use the evidence and the descriptions of the suspects to identify the mystery moustache meddler!



The Mystery at the Grand Portrait Gallery

Description of Suspects

Name	Male/ Female	Height	Group Name	Type of Chocolate in Lunchbox	Shoe Size
Alesso	m	tall	Klee	Caramel Bite	5
Bridget	f	short	Mondrian	Dippy Duo	5
Claude	m	tall	Klee	Caramel Bite	3
Dora	f	tall	Cézanne	Dippy Duo	5
Eugene	m	tall	Klee	Dippy Duo	3
Frieda	f	short	Mondrian	Nutty Choc	3
Georgia	f	tall	Klee	Caramel Bite	4
Hans	m	short	Cézanne	Nutty Choc	3
Ingrid	f	tall	Klee	Caramel Bite	5
Jean	m	tall	Mondrian	Dippy Duo	3
Kiki	f	tall	Cézanne	Caramel Bite	5
Louis	m	short	Mondrian	Dippy Duo	4
Maya	f	tall	Monet	Dippy Duo	3
Nicolas	m	tall	Klee	Caramel Bite	5
Orlan	m	tall	Klee	Dippy Duo	4
Pierre	m	short	Mondrian	Dippy Duo	4
Raphael	m	tall	Klee	Caramel Bite	4
Sisco	m	tall	Monet	Nutty Choc	4
Tomas	m	tall	Klee	Choco Glory	4
Veronique	f	short	Monet	Caramel Bite	5

The Mystery at the Grand Portrait Gallery

Clue 1: Forwards and Backwards

Add the missing numbers to complete the number patterns.

Count on in multiples of 2.

10				
----	--	--	--	--

Count on in multiples of 5.

15				
----	--	--	--	--

Count on in multiples of 10.

20				
----	--	--	--	--

Count back in multiples of 2.

24				
----	--	--	--	--

Count back in multiples of 5.

30				
----	--	--	--	--

Count back in multiples of 10.

60				
----	--	--	--	--

The Mystery at the Grand Portrait Gallery

Look at the last number in each row. Find the numbers in the table below and colour them in.

Rearrange the words into a sentence to solve the first clue.

18 is	60 doodler	35 the
50 short	20 tall	14 female
10 mysterious	16 moustache	15 chocolate

Answer to clue 1: _____




The Mystery at the Grand Portrait Gallery

Clue 2: Right or Wrong

Work out if these statements are right or wrong.

Then count the number of right answers and the number of wrong answers.

	Right	Wrong
A rectangle has two long sides the same length and two shorter sides the same length.		
These coins add up to £1.16. 		
140cm is the same as 1m 40cm.		
There are 15 days in two weeks.		
A cylinder has two squares at each end.		
$2 + 2 + 2 + 2$ is equal to 4×2 .		
$42 - 13 = 30$		

If there are more right answers, the moustache doodler is female.

If there are more wrong answers, the moustache doodler is male.

Circle one: male female







The Mystery at the Grand Portrait Gallery

Clue 3: Arrays of Arrays!

Here are some arrays.

Use the table below to find which calculation they show.

Rearrange the words to make a sentence to solve the third clue.

1. 	4. 
2. 	5. 
3. 	6. 

$8 \times 3 = 24$ is	$10 \times 3 = 30$ Klee	$4 \times 5 = 20$ Cézanne	$4 \times 3 = 12$ in
$10 \times 5 = 50$ Choco Glory	$8 \times 2 = 16$ Monet	$6 \times 2 = 12$ vandal	$2 \times 7 = 14$ chocolate
$5 \times 2 = 10$ the	$2 \times 3 = 6$ found	$5 \times 5 = 25$ group	$10 \times 2 = 20$ wrapper

Answer to clue 3: _____

The Mystery at the Grand Portrait Gallery

Clue 4: Fraction of a Whole

Match up the fraction statements with the correct answers. Rearrange the words to make a sentence to solve the fourth clue.

$\frac{1}{2}$ of 8	$\frac{1}{4}$ of 24	$\frac{1}{2}$ of 10	$\frac{1}{4}$ of 28
$\frac{1}{2}$ of 6	$\frac{1}{4}$ of 48	$\frac{1}{2}$ of 18	$\frac{1}{4}$ of 40

3 was	0 shoe	4 beside	10 found
1 Dippy Duo	5 wrapper	11 Choco Glory	7 Caramel Bite
6 the	9 a	12 paintings	2 size

Answer to clue 4: _____



The Mystery at the Grand Portrait Gallery

Clue 5: Missing Moustaches

Fill in the missing numbers.

Then, colour in the numbers you have written in the table below.

Rearrange the words to make a sentence to solve the final clue.

Be careful, sometimes you need to count forwards and sometimes backwards!

96	97		99		102
103			100		98
88	89		91		93
75	74		72	71	

102 the	76 five	101 drawing
90 vandal	73 moustache	105 three
66 behind	100 a	99 left
98 size	70 four	92 footprint

Answer to clue 5: _____

The Monkey Mystery at Animal Antics Zoo Maths Game

The Animal Antics Zoo is a popular tourist and school holiday venue. Harassed parents and excited children regularly fill the grounds, eager to see the enormous mountain gorillas, the cheeky baboons and the laughing chimps.

However, disaster has struck. Those troublesome primates have excelled themselves. One of them has sneakily taken the keys belonging to the senior keeper, and when no one was looking, has unlocked the enclosure and many monkeys have escaped! They are now causing mayhem around the zoo, pulling faces at the elephants, laughing at the leopards and flustering the usually unflappable flamingos!

But which monkey did the crime?

Your mission is to use the description of the monkeys to solve the clues so you can establish who let the pesky primates run riot at the zoo!



Description of suspects

Name	M/F	Type of Monkey	Favourite Food	Height (cm)	Special Feature
Ailsa	f	howler	fruit	86	friendly
Bobby	m	mandrill	fruit	94	sociable
Coco	m	mandrill	tree bark	91	sociable
Delilah	f	capuchin	seeds	55	noisy
Eric	m	howler	leaves	83	screeches
Frodo	m	baboon	leaves	60	friendly
Gimley	m	mandrill	fruit	91	noisy
Hattie	f	baboon	leaves	63	sociable
Ishmael	m	capuchin	seeds	56	noisy
Jimmy	m	howler	fruit	86	screeches
Kala	f	capuchin	seeds	57	noisy
Larry	m	mandrill	fruit	91	sociable
Mena	f	mandrill	fruit	90	screeches
Nobu	m	howler	leaves	85	sociable
Ophelia	f	howler	nuts	87	friendly
Piccu	m	mandrill	fruit	90	sociable
Rafe	m	mandrill	fruit	89	sociable
Si	m	capuchin	nuts	55	noisy
Tee Tee	f	baboon	leaves	61	sociable
Uri	m	howler	fruit	88	screeches
Veronica	f	capuchin	nuts	57	noisy
Wendy	f	baboon	leaves	62	noisy
Yoyo	f	mandrill	fruit	89	sociable
Zebedee	m	howler	nuts	87	sociable
Ash	m	mandrill	fruit	92	sociable
Billy	m	howler	fruit	87	friendly
Cecil	m	capuchin	fruit	58	friendly
Dave	m	capuchin	nuts	56	noisy
Esher	f	baboon	leaves	64	friendly
Fifi	f	mandrill	tree bark	91	sociable

Clue 1: Zoo True or False?

Work out if these statements are true or false.

	True	False
If there are four enclosures each holding eight lemurs, there must be thirty-two lemurs altogether.		
One side of a pentagonal enclosure measures 18m. The perimeter must be 108m.		
0.25 equals $\frac{1}{4}$.		
XIX is the same as 18.		
$218 - 89 = 119$		
The giraffes have 24kg of food. They eat half. The remainder would be 12 000g.		
The penguin enclosure is closed for $\frac{1}{4}$ of the year. That means it is closed for four months.		
A child's ticket to the zoo costs £14.45. An adult's ticket costs £19.40. For two adults and one child, the price will be £53.25.		
Annual membership to the zoo for one adult costs £60. That works out at £5 a month.		

If there are more true answers, the mischievous monkey is male.

If there are more false answers, it is female.

Tick one

male

female

Clue 2: Divide and Conquer!

1. $210 \div 10 = \underline{\hspace{2cm}}$

5. $3 \div 10 = \underline{\hspace{2cm}}$

2. $3000 \div 10 = \underline{\hspace{2cm}}$

6. $7 \div 10 = \underline{\hspace{2cm}}$

3. $270 \div 10 = \underline{\hspace{2cm}}$

7. $300 \div 100 = \underline{\hspace{2cm}}$

4. $27 \div 100 = \underline{\hspace{2cm}}$

8. $21 \div 100 = \underline{\hspace{2cm}}$

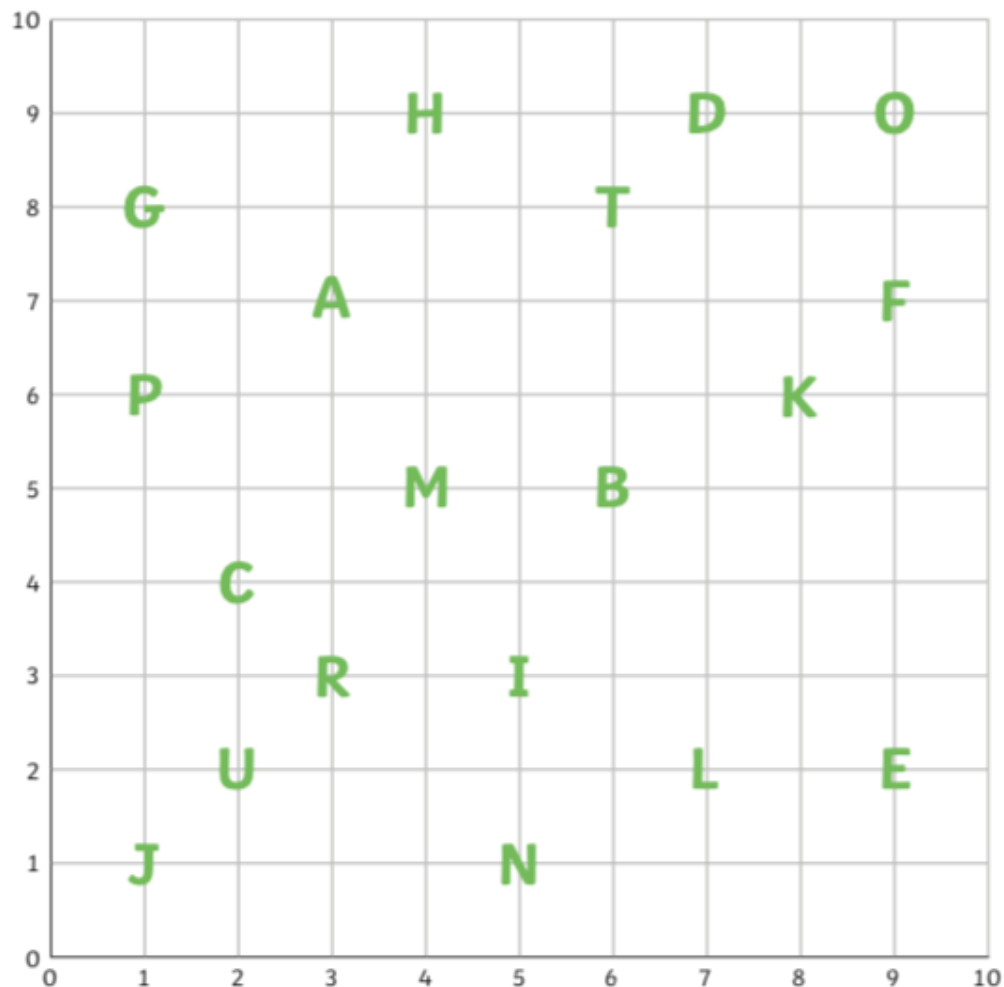
0.1 keys	0.03 friendly	0.7 mischievous	27 creature
0.3 is	3000 primate	2.1 noisy	21.7 leaves
0.27 monkey	21 a	30 seeds	300 very
3 the	0.07 screeches	0.027 fruit	0.21 sociable

Answer: _____.

Canonbury Home Learning

Clue 3: Along the Landing and Up the Stairs

Those cheeky monkeys have hidden the next clue in the coordinates. Use the grid below to solve the third clue.



(9,2)	(6,8)	(2,2)	(6,8)	(3,7)	(3,3)	(5,3)	(9,7)
-------	-------	-------	-------	-------	-------	-------	-------

Two words: _____

Clue 4: Feeding Time at the Zoo

Convert the 12-hour clock times to 24-hour clock times.

Then use the words below to solve the fourth clue.

Animals	12-hour clock	24-hour clock
elephants	3.45 p.m.	
tigers	2 p.m.	
chimpanzees	1.25 p.m.	
penguins	2.30 p.m.	
bear	4.15 p.m.	
meerkats	4 p.m.	
seals	3.40 p.m.	
lemurs	5.20 p.m.	

16.40 wasn't	13.00 capuchin	15.45 was	13.40 height
14.00 keys	15.40 who	16.16 baboon	17.20 mandrill
16.15 the	12.40 short	14.30 stole	30.30 lost
14.40 howler	13.25 monkey	13.30 dropped	16.00 a

Answer: _____

Canonbury Home Learning

Clue 5: How Tall is the Monkey?

Solve these statements. Whichever answer occurs the most frequently is the height of the cheeky monkey.

1.
$$\begin{array}{r} \times \quad 23 \\ \quad 4 \\ \hline \end{array}$$

2. $178 \div 2 = \underline{\hspace{2cm}}$

3.
$$\begin{array}{r} + \quad 42 \\ \quad 49 \\ \hline \end{array}$$

4.
$$\begin{array}{r} \times \quad 47 \\ \quad 2 \\ \hline \end{array}$$

5.
$$\begin{array}{r} - \quad 121 \\ \quad 27 \\ \hline \end{array}$$

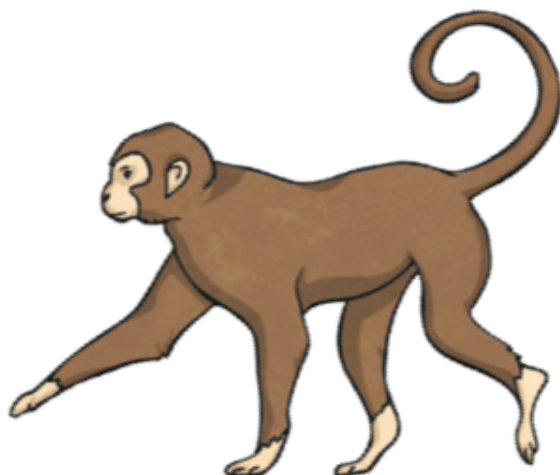
6.
$$\begin{array}{r} - \quad 564 \\ \quad 475 \\ \hline \end{array}$$

7.
$$\begin{array}{r} - \quad 1000 \\ \quad 908 \\ \hline \end{array}$$

8. $184 \div 2 = \underline{\hspace{2cm}}$

The most frequent answer is: _____

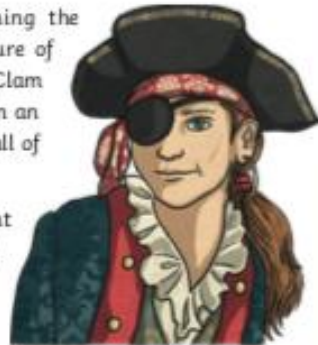
Therefore, _____ is the mischievous monkey who stole the keys and let the other animals out!



The Mystery of the Missing Pirate Treasure

The pirates of the Jolly Jack have been searching the Caribbean for months looking for the lost treasure of the Crusty Clam. Legend has it that the Crusty Clam was damaged in a terrible storm and washed up on an island. In its hold was said to be a treasure chest full of gold, jewels and gems.

The Jolly Jack's captain, Olly Eyepatch, has thought of nothing but finding the lost treasure of the Crusty Clam. She has spent weeks searching through old pirate books and maps trying to find out which island the legendary treasure is buried on.



Can you help Olly Eyepatch and her pirate crew to solve the clues and find out which island the legendary treasure is buried on?

Good luck!



The Mystery of the Missing Pirate Treasure

Location	Highest point above sea level	Population	Distance	Location of the island's treasure caves
Albatross Cliffs Island	220m	17 246	251 miles	north
Barnacle Beach Island	575m	82 105	164 miles	south-west
Cutlass Creek Island	8m	6504	25 miles	north-east
Deserted Island	22m	19 995	39 miles	south-west
Fenny Bank Island	3m	11 785	156 miles	north-east
Grotto Island	314m	22 700	264 miles	east
Golden Ghost Island	307m	1687	189 miles	south-west
Helter-Skelter Island	689m	8452	65 miles	west
Kelpie Bay Island	64m	21 564	100 miles	south-east
Limpet Lookout Island	192m	8658	36 miles	south-west
Mermaid Mile Island	60m	1562	8 miles	north-west
Poison Reef Island	1m	12 092	154 miles	south
Ring of Rocks Island	218m	560	92 miles	north-west
Sinister Pool Island	562m	861	87 miles	south-east
Vulture Valley Island	258m	9027	98 miles	south-east
Whitewater Bay Island	452m	2929	58 miles	south-east

The buried treasure can be found on: _____



The Mystery of the Missing Pirate Treasure

Clue 1

Check these maths calculations. If a calculation is right, put a tick. If it is wrong, put a cross.

Count up the number of ticks and crosses.

If there are more ticks than crosses, the buried treasure is more than 150 metres above sea level.

If there are more crosses than ticks, the buried treasure is less than 150 metres above sea level.

	Right ✓	Wrong ✗
$32.6 - 21.52 = 11.8$		
$10.04 + 17.37 = 27.41$		
$2.3 + 1.84 + 3.07 = 6.94$		
$95.32 - 26.86 = 68.46$		
$1.257 + 15.682 = 16.939$		
$68.72 - 39.562 = 29.162$		
$15.686 + 39.868 = 55.554$		
$107.248 - 57.3 = 49.948$		
$84.732 - 69.92 = 14.64$		
Total		

Clue 1: _____



The Mystery of the Missing Pirate Treasure

Clue 2

Use written methods of multiplication and division to solve these calculations. Colour the answers in the table below. Re-arrange the shaded words to find the second clue.

1. $18 \times 36 =$	2. $756 \div 9 =$	3. $8.2 \times 12 =$
4. $1024 \div 8 =$	5. $19 \times 28 =$	6. $65 \times 92 =$

98.4 the	92.4 is more than	88 one thousand	540 six thousand
84 of the	532 population	640 five thousand	130 four thousand
648 island	128 is less than	5980 ten thousand	6980 three thousand

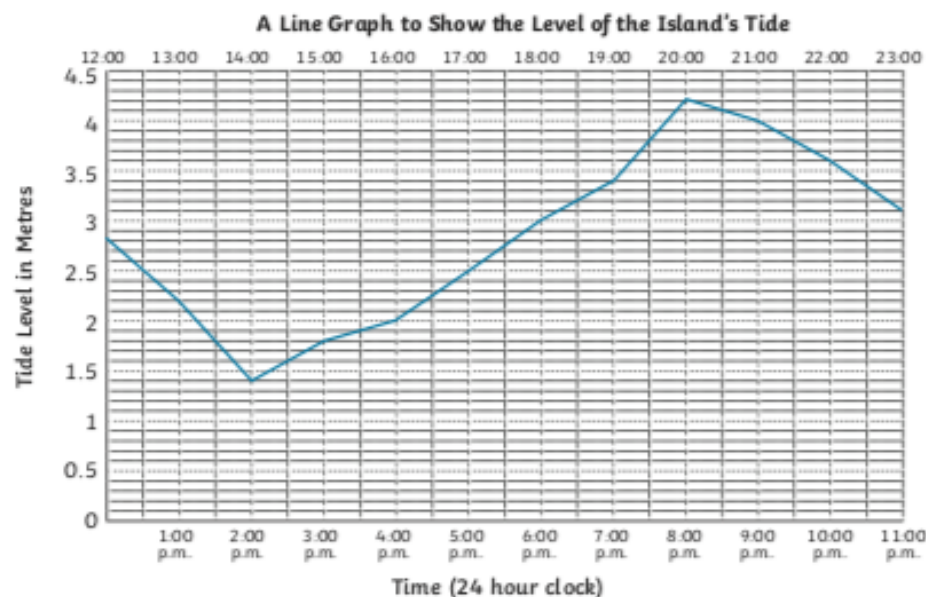
Clue 2: _____



The Mystery of the Missing Pirate Treasure

Clue 3

Answer the questions about the tide on the mystery treasure island. Colour the answers in the table below. Re-arrange the shaded words to find the third clue.



What is the height of the tide at 3:00 p.m. in the afternoon?

How many hours did it take for the tide to change from its lowest level to its highest level?

What is the height of the tide at 7:00 p.m.?

By how many metres did the tide level change between 2:00 p.m. and 8:00 p.m.?

By how many metres did the tide level change between 8:00 p.m. and 11:00 p.m.?

6 hours	1.7 metres	1.2 metres	1.1 metres
the	is less than	60 miles	70 miles
5 hours	3.4 metres	2.8 metres	1.8 metres
80 miles	island	is more than	away

Clue 3: _____

The Mystery of the Missing Pirate Treasure

Clue 4

Order each set of numbers from smallest to largest. Take the largest number in each set and colour it in the table below. Re-arrange the shaded words to find the final clue.

1.	2.6	1.84	1.8	1.805	2.06
2.	1.1	1.2	2.1	1.19	2.2
3.	$\frac{5}{8}$	$\frac{1}{2}$	$\frac{5}{6}$	$\frac{11}{24}$	$\frac{2}{3}$
4.	56 235	56 181	56 824	65 455	56 881
5.	56.268	562.68	5.626	56 268	5626.8

the south-west 2.06	located in $\frac{5}{6}$	treasure caves 2.2	the north-east 2.1
island's 2.6	the south-east $\frac{2}{3}$	the north 56 881	the east 5626.8
are 65 455	the south 1.84	the north-west 56 268	the west $\frac{5}{8}$

Clue 4: _____

