

Monday 13<sup>th</sup> July

## Two-way Tables

## Introduction

This table shows the favourite meals for a youth club.

Complete the table.

	Roast Dinner	Pizza	Pasta Bolognese	Total
Male	119	128	96	
Female	122	108	110	
Total				

## Introduction

This table shows the favourite meals for a youth club.

Complete the table.

	Roast Dinner	Pizza	Pasta Bolognese	Total
Male	119	128	96	343
Female	122	108	110	340
Total	241	236	206	683

### Varied Fluency 1

This table shows the ice creams sold by an ice cream van last week.

	Vanilla	Chocolate	Both	Total
Plain	A	B	C	D
Sprinkles	E	F	G	H
Sprinkles and Flake	I	J	K	L
Total	M	N	O	P

Which letter shows:

A. How many ice creams were sold with only sprinkles?

B. The number of plain chocolate ice creams that were sold?

### Varied Fluency 1

This table shows the ice creams sold by an ice cream van last week.

	Vanilla	Chocolate	Both	Total
Plain	A	B	C	D
Sprinkles	E	F	G	H
Sprinkles and Flake	I	J	K	L
Total	M	N	O	P

Which letter shows:

A. How many ice creams were sold with only sprinkles? **H**

B. The number of plain chocolate ice creams that were sold? **B**

## Varied Fluency 2

This table shows the sales of hot drinks at a school fayre.

	Tea	Coffee	Other	Total
Small	156	262	55	473
Medium	84	174	46	304
Large	73	122	25	220
Total	313	558	126	997

A. How many large coffees were sold?

B. How many more coffees were sold than teas?



## Varied Fluency 2

This table shows the sales of hot drinks at a school fayre.

	Tea	Coffee	Other	Total
Small	156	262	55	473
Medium	84	174	46	304
Large	73	122	25	220
Total	313	558	126	997

A. How many large coffees were sold? **122**

B. How many more coffees were sold than teas?  **$558 - 313 = 245$**

### Varied Fluency 3

This table shows the first letter of the surnames in a primary school.

Complete the table.

	A - L	M - Z	Total
Year 1/2	165	154	
Year 3/4	124	165	289
Year 5/6	157		332
Total	446		940



### Varied Fluency 3

This table shows the first letter of the surnames in a primary school.

Complete the table.

	A - L	M - Z	Total
Year 1/2	165	154	319
Year 3/4	124	165	289
Year 5/6	157	175	332
Total	446	494	940

# Varied Fluency

This two-way table shows the staff at Liverpool police station.

	Male	Female	Total
Constable	55	24	79
Sergeant	8	5	13
Inspector	2	4	6
Chief Inspector	1	1	2
Total	66	34	100

- How many female inspectors are there?
- How many male sergeants are there?
- How many constables are there altogether?
- How many people work at Liverpool police station?
- How many male inspectors and female constables are there altogether?

Complete the table.

	Man United	Liverpool	Chelsea	TOTAL
Lost	36	42	29	
Won	174	76	126	
TOTAL				

Write questions about the information for a friend to solve.

- Which column do I need to look in to find the information?
- Which row do I need to look in to find the information?
- How do I calculate the total of a row/column?
- If I know the total, how can I calculate any missing information?

### Problem Solving 1

This table shows the favourite subjects of students in a secondary school.

	Maths	English	Science	Total
Male	105	86	304	495
Female	A	155	245	495
Total	200	B	549	990

Write two word problems where the answer would be A or B.  
Calculate the correct answer for each.

### Problem Solving 1

This table shows the favourite subjects of students in a secondary school.

	Maths	English	Science	Total
Male	105	86	304	495
Female	A - 95	155	245	495
Total	200	B - 241	549	990

Write two word problems where the answer would be A or B.  
Calculate the correct answer for each.

Various answers, for example: A = How many female students said that maths was their favourite subject?  $200 - 105 = A$      $A = 95$   
B = How many fewer students said that English was their favourite subject compared to science?  $86 + 155 = B$      $B = 241$



### Reasoning 1

This table shows the number of bath bombs produced by 3 people over 3 days.

The table is incomplete.

	Chloe	Jake	Ash	Total
Mon	163		89	353
Tues		94	83	309
Wed		93	68	218
Total		288		

Chloe says, "I made 67 bath bombs on Wednesday."

Do you agree with Chloe? Convince me.

### Reasoning 1

This table shows the number of bath bombs produced by 3 people over 3 days.

The table is incomplete.

	Chloe	Jake	Ash	Total
Mon	163		89	353
Tues		94	83	309
Wed		93	68	218
Total		288		

Chloe says, "I made 67 bath bombs on Wednesday."

Do you agree with Chloe? Convince me.

Chloe is incorrect because...



### Reasoning 1

This table shows the number of bath bombs produced by 3 people over 3 days.

The table is incomplete.

	Chloe	Jake	Ash	Total
Mon	163	101	89	353
Tues	132	94	83	309
Wed	57	93	68	218
Total	352	288	240	880

Chloe says, "I made 67 bath bombs on Wednesday."

Do you agree with Chloe? Convince me.

Chloe is incorrect because she made 57 bath bombs on Wednesday.  $93 + 68 = 161$ .  $218 - 161 = 57$ .

Or filling in other information;  $163 + 132 = 295$ .  $352 - 295 = 57$ .

## Reasoning 2

Using the information below, complete the two-way table.

**Types of Monster Cards**

	Sky	Water	Fire	Total
Sam		174	42	
Ross	57	163	62	
Lauren			78	333
Total			182	

- Sam has twice as many sky cards as fire cards.
- The friends have 509 water cards between them.
- Lauren has one fewer sky card than Sam.
- True or false? Sam has the most cards in total. Explain how you know.

## Reasoning 2

Using the information below, complete the two-way table.

### Types of Monster Cards

	Sky	Water	Fire	Total
Sam	84	174	42	300
Ross	57	163	62	282
Lauren	83	172	78	333
Total	224	509	182	915

- Sam has twice as many sky cards as fire cards.
- The friends have 509 water cards between them.
- Lauren has one fewer sky card than Sam.
- True or false? Sam has the most cards in total. Explain how you know.

I know it is false because...

## Reasoning 2

Using the information below, complete the two-way table.

### Types of Monster Cards

	Sky	Water	Fire	Total
Sam	84	174	42	300
Ross	57	163	62	282
Lauren	83	172	78	333
Total	224	509	182	915

- Sam has twice as many sky cards as fire cards.
- The friends have 509 water cards between them.
- Lauren has one fewer sky card than Sam.
- True or false? Sam has the most cards in total. Explain how you know.

**I know it is false because Sam has 300 cards whereas Lauren has 333 cards in total.**



This table shows how many children own dogs and cats.

Fill in the missing gaps and answer the questions below.

	Boys	Girls	Total
Dogs		44	
Cats	38		
Total	125		245

- How many more boys have dogs than girls?
- How many more girls have cats than dogs?
- How many more children have dogs than cats?

120 people were asked where they went on holiday during the summer months of last year.



Use this information to create a two-way table.

In June, 6 people went to France and 18 went to Spain.

In July, 10 people went to France and 19 went to Italy.

In August, 15 people went to Spain.

35 people went to France altogether.

39 people went to Italy altogether.

35 people went away in June.

43 people went on holiday in August.

# Varied Fluency

This two-way table shows the staff at Liverpool police station.

	Male	Female	Total
Constable	55	24	79
Sergeant	8	5	13
Inspector	2	4	6
Chief Inspector	1	1	2
Total	66	34	100

- How many female inspectors are there? 34
- How many male sergeants are there? 8
- How many constables are there altogether? 79
- How many people work at Liverpool police station? 100
- How many male inspectors and female constables are there altogether? 26

Complete the table.

	Man United	Liverpool	Chelsea	TOTAL
Lost	36	42	29	107
Won	174	76	126	376
TOTAL	210	118	155	483

Write questions about the information for a friend to solve.



This table shows how many children own dogs and cats.

Fill in the missing gaps and answer the questions below.

	Boys	Girls	Total
Dogs		44	
Cats	38		
Total	125		245

- How many more boys have dogs than girls?
- How many more girls have cats than dogs?
- How many more children have dogs than cats?

Completed table:

	Boys	Girls	Total
Dogs	87	44	131
Cats	38	76	114
Total	125	120	245

43

32

17

120 people were asked where they went on holiday during the summer months of last year.



Use this information to create a two-way table.

In June, 6 people went to France and 18 went to Spain.

In July, 10 people went to France and 19 went to Italy.

In August, 15 people went to Spain.

35 people went to France altogether.

39 people went to Italy altogether.

35 people went away in June.

43 people went on holiday in August.

You can choose to give children a blank template.

Children may not know where to put the 120, or realise its importance.

Children will need to work

systematically in order to get all of the information.

As a teacher, you could choose not to give the children the complete total and let them find other possible answers.

Tuesday

Timetables

## Introduction

Use the information below to complete the table.

Station	Train A	Train B	Train C
Codsall	6:10		
Cosford		10:35	
Shifnall			12:15

- Train A takes 20 minutes to travel to each station.
- Train B takes 15 minutes to travel to each station.
- Train C takes 25 minutes to travel to each station.

## Introduction

Use the information below to complete the table.

Station	Train A	Train B	Train C
Codsall	6:10	10:20	11:25
Cosford	6:30	10:35	11:50
Shifnall	6:50	10:50	12:15

- Train A takes 20 minutes to travel to each station.
- Train B takes 15 minutes to travel to each station.
- Train C takes 25 minutes to travel to each station.



### Varied Fluency 1

**Meghan is meeting her friend in Birmingham at quarter past 9.  
Which train should she catch from Sheffield?**

<b>Leeds</b>	<b>06:50</b>	<b>07:00</b>	<b>07:00</b>	<b>07:10</b>
<b>Sheffield</b>	<b>07:25</b>	<b>-----</b>	<b>07:40</b>	<b>07:45</b>
<b>Nottingham</b>	<b>07:50</b>	<b>-----</b>	<b>08:09</b>	<b>08:10</b>
<b>Leicester</b>	<b>08:10</b>	<b>08:20</b>	<b>08:30</b>	<b>-----</b>
<b>Birmingham</b>	<b>08:42</b>	<b>08:52</b>	<b>09:04</b>	<b>09:10</b>



### Varied Fluency 1

**Meghan is meeting her friend in Birmingham at quarter past 9.  
Which train should she catch from Sheffield?**

Leeds	06:50	07:00	07:00	07:10
Sheffield	07:25	-----	07:40	07:45
Nottingham	07:50	-----	08:09	08:10
Leicester	08:10	08:20	08:30	-----
Birmingham	08:42	08:52	09:04	09:10

**She should catch the train at 07:45.**

## Varied Fluency 2

**Which shows last for the shortest amount of time?**

Entertainment		Catch Up	
10:50 – 11:30	Sing!	11:00 – 11:35	Live in The Park
11:30 – 12:00	Quiz Time	11:35 – 12:10	Pop and Crisps
12:00 – 12:45	Chums	12:10 – 13:00	Super Stars
12:45 – 13:30	Comedy Hour	13:00 – 13.40	In The Garden

## Varied Fluency 2

Which shows last for the shortest amount of time?

Entertainment		Catch Up	
10:50 – 11:30	Sing!	11:00 – 11:35	Live in The Park
<b>11:30 – 12:00</b>	<b>Quiz Time</b>	11:35 – 12:10	Pop and Crisps
12:00 – 12:45	Chums	12:10 – 13:00	Super Stars
12:45 – 13:30	Comedy Hour	13:00 – 13.40	In The Garden

**Quiz Time is 30 minutes which makes it the shortest show.**

### Varied Fluency 3

**How long is the journey from Outwood to Sandal on the 09:49 bus?**

<b>Leeds</b>	<b>09:35</b>	<b>09:42</b>	<b>09:55</b>	<b>10:05</b>
<b>Outwood</b>	<b>09:44</b>	<b>09:49</b>	<b>-----</b>	<b>-----</b>
<b>Wakefield</b>	<b>10:05</b>	<b>10:15</b>	<b>-----</b>	<b>10:30</b>
<b>Sandal</b>	<b>10:23</b>	<b>10:28</b>	<b>10:30</b>	<b>10:45</b>

### Varied Fluency 3

**How long is the journey from Outwood to Sandal on the 09:49 bus?**

<b>Leeds</b>	<b>09:35</b>	<b>09:42</b>	<b>09:55</b>	<b>10:05</b>
<b>Outwood</b>	<b>09:44</b>	<b>09:49</b>	<b>-----</b>	<b>-----</b>
<b>Wakefield</b>	<b>10:05</b>	<b>10:15</b>	<b>-----</b>	<b>10:30</b>
<b>Sandal</b>	<b>10:23</b>	<b>10:28</b>	<b>10:30</b>	<b>10:45</b>

**The journey is 39 minutes long.**



### Varied Fluency 4

**Below is a school timetable for a morning visit. How long does Class 2 do activities for before lunch?**

	History Walk	Lunch	Museum Tour
Class 1	10:00	11:45-12:15	10:55
Class 2	10:25	12:00-12:30	11:10
Class 3	11:10	12:30-13:00	10:25
Class 4	10:45	12:15-12:45	10:00



### Varied Fluency 4

**Below is a school timetable for a morning visit. How long does Class 2 do activities for before lunch?**

	History Walk	Lunch	Museum Tour
Class 1	10:00	11:45-12:15	10:55
Class 2	10:25	12:00-12:30	11:10
Class 3	11:10	12:30-13:00	10:25
Class 4	10:45	12:15-12:45	10:00

**1 hour and 35 minutes. Class 2 start activities at 10:25 and finish at 12:00.**

# Varied Fluency

Use the timetable to answer the questions.

	Bus Timetable				
Halifax	06:05	06:35	07:10	07:43	08:15
Shelf	06:15	06:45		07:59	08:31
Shelf Village	06:16	06:46	07:23	08:00	08:32
Woodside	06:21	06:50	07:28		
Odsal	06:26	06:55	07:33	08:15	08:45
Bradford	06:40	07:10	07:48	08:30	09:00

On the 06:35 bus, how long does it take to get from Shelf to Bradford?

Can you travel to Woodside on the 07:43 bus from Halifax?

Which journey takes the longest time between Shelf Village and Bradford?

If you needed to travel from Halifax to Odsal and had to arrive by 08:20, which would be the best bus to catch? Explain your answer.

Which bus takes the longest time from Halifax to Bradford?

Amir travels on the 06:35 bus from Halifax to Woodside, how many minutes is he on the bus?

The 08:15 bus is running 12 minutes late, what time does it arrive at Odsal?

- Where do you see timetables and why are they useful?
- What information is displayed in a row when you read across the timetable?
- Why is it important to use 24-hour clock or am/pm on a timetable?

## Reasoning 1

**True or false?**

**Thomas will arrive in Hayes 45 minutes later than planned if he misses the 08:50 from Acton.**

London	08:05	08:35	09:05	09:15
Acton	08:20	08:50	09:20	09:30
Ealing	08:30	-----	09:30	-----
Southall	08:45	09:10	09:45	09:45
Hayes	09:05	09:25	10:05	10:05

**Explain your answer.**

## Reasoning 1

**True or false?**

**Thomas will arrive in Hayes 45 minutes later than planned if he misses the 08:50 from Acton.**

London	08:05	08:35	09:05	09:15
Acton	08:20	08:50	09:20	09:30
Ealing	08:30	-----	09:30	-----
Southall	08:45	09:10	09:45	09:45
Hayes	09:05	09:25	10:05	10:05

**Explain your answer.**

**False because...**



## Reasoning 1

**True or false?**

**Thomas will arrive in Hayes 45 minutes later than planned if he misses the 08:50 from Acton.**

London	08:05	08:35	09:05	09:15
Acton	08:20	08:50	09:20	09:30
Ealing	08:30	-----	09:30	-----
Southall	08:45	09:10	09:45	09:45
Hayes	09:05	09:25	10:05	10:05

**Explain your answer.**

**False because the next train arrives at Hayes at 10:05 which is 40 minutes later than 9:25, not 45 minutes.**



### Problem Solving 1

**Meena visits the cinema at 9:30am. She has 4 hours and 45 minutes before she has to go home.**

**Which shows would she be able to see in this time?**

Screen 1		Screen 2	
10:00-11:50	Toy Time	9:30-10:45	Wolf Tales
11:50-1:30	Racers	10:45-12:15	Wandering Lily
1:30-3:20	City of Dancers	12:15-2:10	Ben's Adventure
3:20-4:40	Super Car	2:10-3:40	Tail Spin

**Find different possibilities.**

### Problem Solving 1

**Meena visits the cinema at 9:30am. She has 4 hours and 45 minutes before she has to go home.**

**Which shows would she be able to see in this time?**

Screen 1		Screen 2	
10:00-11:50	Toy Time	9:30-10:45	Wolf Tales
11:50-1:30	Racers	10:45-12:15	Wandering Lily
1:30-3:20	City of Dancers	12:15-2:10	Ben's Adventure
3:20-4:40	Super Car	2:10-3:40	Tail Spin

**Find different possibilities.**

**Various answers, for example: Toy Time and Ben's Adventure; Toy Time and Races; Wolf Tales and Races**

## Reasoning 2

**Josh thinks there are two mistakes in the bus timetable.**

**Is he correct? Explain your answer.**

<b>Bus Station</b>	<b>01:15</b>	<b>02:20</b>	<b>02:30</b>	<b>02:35</b>
<b>Leeds Road</b>	<b>01:35</b>	<b>-----</b>	<b>-----</b>	<b>02:00</b>
<b>Shopping Centre</b>	<b>01:55</b>	<b>02:50</b>	<b>03:00</b>	<b>-----</b>
<b>High Street</b>	<b>-----</b>	<b>-----</b>	<b>03:45</b>	<b>03:50</b>
<b>Manchester</b>	<b>02:50</b>	<b>03:30</b>	<b>03:45</b>	<b>03:55</b>

## Reasoning 2

**Josh thinks there are two mistakes in the bus timetable.**

**Is he correct? Explain your answer.**

Bus Station	01:15	02:20	02:30	02:35
Leeds Road	01:35	-----	-----	02:00
Shopping Centre	01:55	02:50	03:00	-----
High Street	-----	-----	03:45	03:50
Manchester	02:50	03:30	03:45	03:55

**The 02:30 bus from the bus station is incorrect because...**

**The 02:35 bus from the bus station is incorrect because...**

## Reasoning 2

Josh thinks there are two mistakes in the bus timetable.

Is he correct? Explain your answer.

Bus Station	01:15	02:20	02:30	02:35
Leeds Road	01:35	-----	-----	02:00
Shopping Centre	01:55	02:50	03:00	-----
High Street	-----	-----	03:45	03:50
Manchester	02:50	03:30	03:45	03:55

The 02:30 bus from the bus station is incorrect because it shows the same arrival time at both High Street and Manchester.

The 02:35 bus from the bus station is incorrect because it is due to arrive at Leeds Road at 02:00.



NatureWatch		NatureWatch +1		QuizTime		Cookery Channel	
5 p.m.	News	5 p.m.	Puppy Playtime	5 p.m.	Talk the Talk	5 p.m.	Cheese Please
5:30 p.m.	Weather	6 p.m.	News	5:30 p.m.	Quizdom	6 p.m.	Cook with Lydia
5:45 p.m.	Deep Blue	6:30 p.m.	Weather	6 p.m.	What's the Q?	6:30 p.m.	Pizza Pasta Pietro
6 p.m.	Pampered Pets	6:45 p.m.	Deep Blue	6:30 p.m.	aMAZEment	6:45 p.m.	5 Minute Menu
7 p.m.	Safari	7 p.m.	Pampered Pets	7:30 p.m.	Buzzed Out	7 p.m.	Budget Baker
8:15 p.m.	Animal Antics	8 p.m.	Safari	8 p.m.	Guess the Noise	8 p.m.	Lots of Lollies
9:15 p.m.	Worldly Wonders	9:15 p.m.	Animal Antics	9 p.m.	Dance & Decide	9:15 p.m.	Biscuit Bites

Ron wants to watch the following TV programmes: Cheese Please, What's the Q, aMAZEment, Budget Baker, Safari, Dance & Decide.

Will Ron be able to watch all the shows he has chosen?

It is 18:45. How long is it until 'Guess the Noise' is on?

Here is Rosie's weekly timetable from secondary school.

Y7CM		1 09:15 - 09:55	2 09:55 - 10:45	Break (10:45 - 11:05)	3 11:05 - 11:55	4 11:55 - 12:45	Lunchtime (12:45 - 13:45)	5 13:45 - 14:35	6 14:35 - 15:25
Monday	Daily Assembly (09:00 - 09:15)	Literacy	English		Maths	ICT		PSHCE	Geography
Tuesday		English	Art		French	Science		D.T.	
Wednesday		Literacy	D.T.		Art	Drama		ICT	Science
Thursday		PE	Maths		RE	English		History	PSHCE
Friday		Literacy	Maths		Art	Science		PE	

## True or False?

- Rosie has 2 hours and 20 minutes of PE in a week.
- Rosie has 130 minutes of literacy in a week.
- Rosie does Art for the same length of time as Maths each week.
- Rosie does Art for the same length of time as English each week.

# Varied Fluency

Use the timetable to answer the questions.

	Bus Timetable				
Halifax	06:05	06:35	07:10	07:43	08:15
Shelf	06:15	06:45		07:59	08:31
Shelf Village	06:16	06:46	07:23	08:00	08:32
Woodside	06:21	06:50	07:28		
Odsal	06:26	06:55	07:33	08:15	08:45
Bradford	06:40	07:10	07:48	08:30	09:00

On the 06:35 bus, how long does it take to get from Shelf to Bradford? **25 minutes**

Can you travel to Woodside on the 07:43 bus from Halifax?

Which journey takes the longest time between Shelf Village and Bradford? **No**

If you needed to travel from Halifax to Odsal and had to arrive by 08:20, which would be the best bus to catch? Explain your answer.

Which bus takes the longest time from Halifax to Bradford? **07.10 from Halifax**

Amir travels on the 06:35 bus from Halifax to Woodside, how many minutes is he on the bus? **15 minutes**

The 08:15 bus is running 12 minutes late, what time does it arrive at Odsal? **08.57**

NatureWatch		NatureWatch +1		QuizTime		Cookery Channel	
5 p.m.	News	5 p.m.	Puppy Playtime	5 p.m.	Talk the Talk	5 p.m.	Cheese Please
5:30 p.m.	Weather	6 p.m.	News	5:30 p.m.	Quizdom	6 p.m.	Cook with Lydia
5:45 p.m.	Deep Blue	6:30 p.m.	Weather	6 p.m.	What's the Q?	6:30 p.m.	Pizza Pasta Pietro
6 p.m.	Pampered Pets	6:45 p.m.	Deep Blue	6:30 p.m.	aMAZEment	6:45 p.m.	5 Minute Menu
7 p.m.	Safari	7 p.m.	Pampered Pets	7:30 p.m.	Buzzed Out	7 p.m.	Budget Baker
8:15 p.m.	Animal Antics	8 p.m.	Safari	8 p.m.	Guess the Noise	8 p.m.	Lots of Lollies
9:15 p.m.	Worldly Wonders	9:15 p.m.	Animal Antics	9 p.m.	Dance & Decide	9:15 p.m.	Biscuit Bites

Ron wants to watch the following TV programmes: Cheese Please, What's the Q, aMAZEment, Budget Baker, Safari, Dance & Decide.

Will Ron be able to watch all the shows he has chosen?

It is 18:45. How long is it until 'Guess the Noise' is on?

No, Budget Baker is on at the same time as aMAZEment. Safari also overlaps with Dance & Decide by 15 minutes.

Guess the Noise is on in 1 hour and 15 minutes.



Here is Rosie's weekly timetable from secondary school.

Y7CM	Daily Assembly (09:00 - 09:15)	1 09:15 - 09:55	2 09:55 - 10:45	Break (10:45 - 11:05)	3 11:05 - 11:55	4 11:55 - 12:45	Lunchtime (12:45 - 13:45)	5 13:45 - 14:35	6 14:35 - 15:25
Monday		Literacy	English		Maths	I.C.T.		PSHCE	Geography
Tuesday		English	Art		French	Science		D.T.	
Wednesday		Literacy	D.T.		Art	Drama		I.C.T.	Science
Thursday		P.E.	Maths		RE	English		History	PSHCE
Friday		Literacy	Maths		Art	Science		P.E.	

## True or False?

- Rosie has 2 hours and 20 minutes of PE in a week.
- Rosie has 130 minutes of literacy in a week.
- Rosie does Art for the same length of time as Maths each week.
- Rosie does Art for the same length of time as English each week.

True

False, 120 mins (2 hours)

True

False (150 mins of Art, 140 mins of English)

Wednesday and Thursday

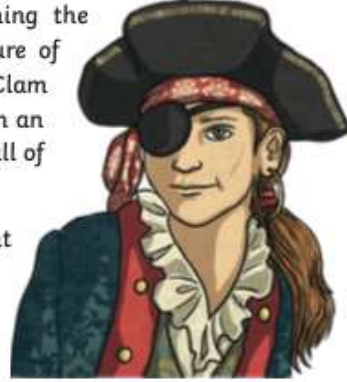
Use your knowledge to solve the mystery of the missing pirates treasure.



# 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: \_\_\_\_\_

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

Clue 1: \_\_\_\_\_

\_\_\_\_\_



**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: \_\_\_\_\_

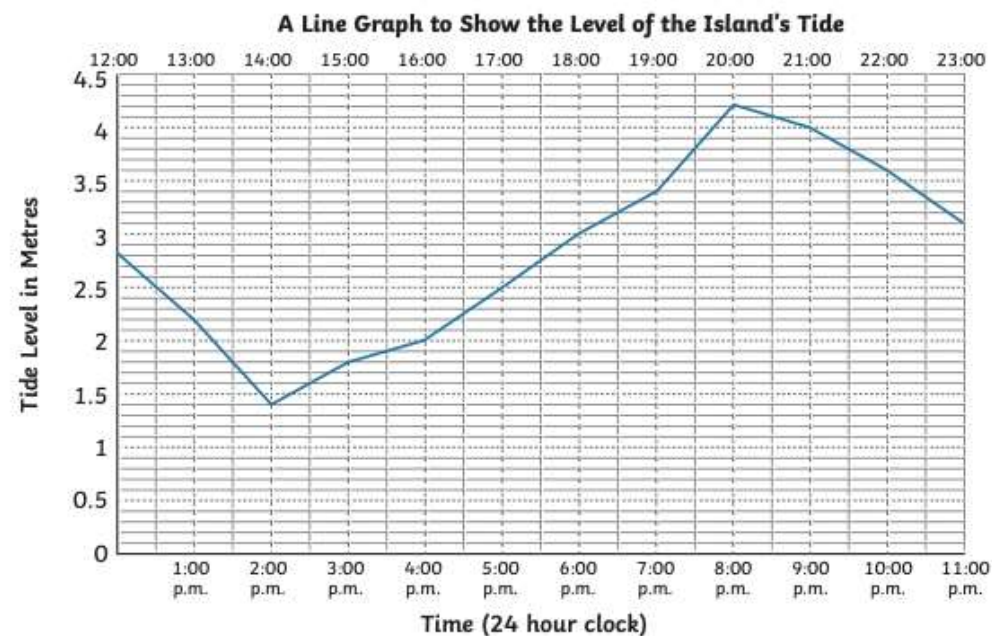
\_\_\_\_\_





### 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: \_\_\_\_\_



**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
	_____	_____	_____	_____	_____

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

Clue 4: \_\_\_\_\_

\_\_\_\_\_



# The Mystery of the Missing Pirate

## Treasure **Answers**

### Clue 1

	Right	Wrong ✕
$32.6 - 21.52 = 11.8$		✕ (11.08)
$10.04 + 17.37 = 27.41$	✓	
$2.3 + 1.84 + 3.07 = 6.94$		✕ (7.21)
$95.32 - 26.86 = 68.46$	✓	
$1.257 + 15.682 = 16.939$	✓	
$68.72 - 39.562 = 29.162$		✕ (29.158)
$15.686 + 39.868 = 55.554$	✓	
$107.248 - 57.3 = 49.948$	✓	
$84.732 - 69.92 = 14.64$		✕ (14.812)
<b>Total</b>	<b>5</b>	<b>4</b>

Clue 1:                     **The buried treasure is more than 150 metres above sea level.**

### 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. $18 \times 36 = \mathbf{648}$	2. $756 \div 9 = \mathbf{84}$	3. $8.2 \times 12 = \mathbf{98.4}$
4. $1024 \div 8 = \mathbf{128}$	5. $19 \times 28 = \mathbf{532}$	6. $65 \times 92 = \mathbf{5980}$

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

Clue 2:                     **The population of the island is less than ten thousand.**

**Clue 3**

What is the height of the tide at 3:00 p.m. in the afternoon? **(1.8 metres)**

How many hours did it take for the tide to change from its lowest level to its highest level? **(6 hours)**

What is the height of the tide at 7:00 p.m.? **(3.4 metres)**

By how many metres did the tide level change between 2:00 p.m. and 8:00 p.m.? **(2.8 metres)**

By how many metres did the tide level change between 8:00 p.m. and 11:00 p.m.? **(1.1 metres)**

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

Clue 3: **The island is more than 70 miles away.**

<b>Clue 4</b>	1.	2.6	1.84	1.8	1.805	2.06
		<b>1.8</b>	<b>1.805</b>	<b>1.84</b>	<b>2.06</b>	<b>2.6</b>
	2.	1.1	1.2	2.1	1.19	2.2
		<b>1.1</b>	<b>1.19</b>	<b>1.2</b>	<b>2.1</b>	<b>2.2</b>
	3.	$\frac{5}{8}$	$\frac{1}{2}$	$\frac{5}{6}$	$\frac{11}{24}$	$\frac{2}{3}$
		<b><math>\frac{11}{24}</math></b>	<b><math>\frac{1}{2}</math></b>	<b><math>\frac{5}{8}</math></b>	<b><math>\frac{2}{3}</math></b>	<b><math>\frac{5}{6}</math></b>
	4.	56 235	56 181	56 824	65 455	56 881
		<b>56 181</b>	<b>56 235</b>	<b>56 824</b>	<b>56 881</b>	<b>65 455</b>
	5.	56.268	562.68	5.626	56 268	5626.8
		<b>5.626</b>	<b>56.265</b>	<b>562.68</b>	<b>5626.8</b>	<b>56 268</b>

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

Clue 4: **The island's treasure caves are located in the north-west.**

The buried treasure can be found on: **Ring of Rocks Island**

# Arithmetic Year 5

1	$18 + 6 + 6 =$	<input type="text"/>	<input type="text"/> 1 mark
2	$2,360 + 100 =$	<input type="text"/>	<input type="text"/> 1 mark
3	$25 \times 1 =$	<input type="text"/>	<input type="text"/> 1 mark
4	$36 \div 4 =$	<input type="text"/>	<input type="text"/> 1 mark
5	$547 + 38 =$	<input type="text"/>	<input type="text"/> 1 mark
6	$435 \times 0 =$	<input type="text"/>	<input type="text"/> 1 mark
7	$499 + 5 =$	<input type="text"/>	<input type="text"/> 1 mark

8	$\frac{6}{7} - \frac{2}{7} =$	<input type="text"/>	<input type="text"/> 1 mark
9	$6 \times 7 =$	<input type="text"/>	<input type="text"/> 1 mark
10	$504 - 85 =$	<input type="text"/>	<input type="text"/> 1 mark
11	$\frac{1}{8}$ of 72 =	<input type="text"/>	<input type="text"/> 1 mark
12	$\begin{array}{r} 36,839 \\ + 31,878 \\ \hline \end{array}$	<input type="text"/>	<input type="text"/> 1 mark
13	$9 \times 4 \times 2 =$	<input type="text"/>	<input type="text"/> 1 mark
14	$9^2 =$	<input type="text"/>	<input type="text"/> 1 mark



15	$762 \div 6 =$	<input type="text"/>	<input type="text"/> 1 mark
16	$17.4 - 5.1 =$	<input type="text"/>	<input type="text"/> 1 mark
17	$\begin{array}{r} 33,321 \\ - 23,406 \\ \hline \end{array}$	<input type="text"/>	<input type="text"/> 1 mark
18	$80.08 \div 10 =$	<input type="text"/>	<input type="text"/> 1 mark
19	$0.9 = ?\%$	<input type="text"/>	<input type="text"/> 1 mark
20	$\begin{array}{r} 3104 \\ \times 8 \\ \hline \end{array}$	<input type="text"/>	<input type="text"/> 1 mark
21	$28.8 \times 1000 =$	<input type="text"/>	<input type="text"/> 1 mark

22	$30 \times 200 =$	<input type="text"/>	<input type="text"/> 1 mark
23	$2.126 \times 7 =$	<input type="text"/>	<input type="text"/> 1 mark
24	$0.1 = \frac{?}{100}$	<input type="text"/>	<input type="text"/> 1 mark
25	$\begin{array}{r} 47 \\ \times 81 \\ \hline \end{array}$	<input type="text"/>	<input type="text"/> 2 marks
26	$\frac{5}{7}$ of 105 =	<input type="text"/>	<input type="text"/> 1 mark
27	$6.1 + 2.35 =$	<input type="text"/>	<input type="text"/> 1 mark
28	$\frac{5}{6} + \frac{1}{12} =$	<input type="text"/>	<input type="text"/> 1 mark
29	$2\frac{3}{4} \times 2 =$	<input type="text"/>	<input type="text"/> 1 mark

# Mark scheme

1.	30	[1]
2.	2,460	[1]
3.	25	[1]
4.	9	[1]
5.	585	[1]
6.	0	[1]
7.	504	[1]
8.	$\frac{4}{7}$	[1]
9.	42	[1]
10.	419	[1]
11.	9	[1]
12.	68,717	[1]
13.	72	[1]
14.	81	[1]
15.	127	[1]
16.	12.3	[1]
17.	9,915	[1]
18.	8.008	[1]

19.	90%	[1]
20.	24,832	[1]
21.	28,800	[1]
22.	6,000	[1]
23.	14.882	[1]
24.	$\frac{10}{100}$	[1]
25.	For 2 marks: 3,807	[2]
Award only 1 mark if there is <i>either</i> one error in the multiplication steps, then added correctly, <i>or</i> no error in the multiplication steps but an error in the addition step.		
26.	75	[1]
27.	8.45	[1]
28.	$\frac{11}{12}$	[1]
29.	$5\frac{1}{2}$ or equivalent	[1]
e.g. $\frac{22}{4}$		
<b>Do not</b> accept unconventional notation for mixed numbers		
e.g. $4\frac{6}{4}$		

# Year 6 Arithmetic

<https://myminimaths.co.uk/year-6-arithmetic-practice-paper-week-4/>

<https://myminimaths.co.uk/year-6-arithmetic-practice-paper-week-4-answers/>