The Mystery of the Missing Sacks on Sports Day

It is the annual Big Bash Sports Day at St. Peter's Academy. Everyone is really excited and they are especially looking forward to the silly sack race between the teachers!

The sun is shining, the race tracks are marked out and parents are gathering around. However, disaster has struck! Mr. Patel has gone to the PE cupboard to get the sacks and they are missing!

Fortunately, the sack thief has not been as careful as they thought they had been and some clues have been left behind.

As Chief Inspector, you have to use the descriptions of all the people who were seen near the PE cupboard the day before and solve the clues to unmask the sack thief! Good luck!

Name	Male / female	Year group	Team colour	Make of trainers	Favourite drink
Amy Amstell	F	4	Red	Whizz	PowerUp
Bertram Billings	M	3	Blue	Fli	Zoosh
Cassius Cranford	M	4	Green	Jester	Juice Blast
Dev Desai	M	3	Red	Fli	PowerUp
Evie Enderby	F	4	Green	Jester	Coola
Filip Fabian	M	4	Blue	Whizz	Zoosh
Gabriella Grange	F	4	Yellow	Jester	Coola
Hamza Hussaini	M	4	Green	Jester	Juice Blast
Isla Ingers	F	3	Yellow	Fli	PowerUp
Ju Jin	F	4	Yellow	Fli	Zoosh
Kamal King	M	4	Red	Jester	Juice Blast
Lowri Lane	F	3	Blue	Whizz	Zoosh
Marcel Miazga	M	4	Green	Jester	Coola
Niall Neville	M	4	Yellow	Fli	Juice Blast
Olga Ostrowski	F	4	Blue	Hooper	Coola
Pippa Pane	F	4	Red	Hooper	PowerUp

Name	Male / female	Year group	Team colour	Make of trainers	Favourite drink
Qi Quinn	M	3	Green	Whizz	Juice Blast
Rosie Raines	F	4	Yellow	Hooper	Coola
Sebastian Simpson	M	4	Green	Jester	PowerUp
Tia Travers	F	3	Blue	Fli	Zoosh
Uri Underwood	M	4	Red	Fli	Coola
Veronica Vest	F	3	Yellow	Jester	Zoosh
Will Walker	M	4	Green	Hooper	Coola
Xavier Xian	M	4	Green	Jester	Juice Blast
Yves Yellow	F	4	Red	Fli	Juice Blast
Zoe Zapper	F	4	Blue	Hooper	Coola
Andy Amos	M	4	Green	Jester	Coola
Bilhal Beal	M	3	Yellow	Fli	PowerUp
Cassie Crane	F	4	Red	Hooper	Zoosh
Daria Dimbleby	F	4	Green	Whizz	Coola
Elena Enkel	F	3	Yellow	Fli	Juice Blast
Frankie Fraser	M	4	Blue	Jester	PowerUp
Gavin Grade	M	4	Green	Jester	Zoosh

Clue 1: It's All in the Place Value

Work out whether the missing answers are ten or one hundred more or less, and use the words in the table to solve clue number 1.

1. [ ]   319   419

2. 672   682   [ ]

3. 189   199   [ ]

4. [ ]   433   533

5. [ ]   401   411

6. [ ]   639   739

7. 868   878   [ ]

549 Zoosh	333 thief	491 female
692 sack	210 male	898 three
219 in	103 trainer	391 the
323 bottle	209 was	782 Hooper
888 Four	439 found	539 year

Answer to Clue 1:

_____

Clue 2: Yes or No?

Work out if these answers are correct or not, by writing Yes or No.

|	Yes	No
Mia says that if she starts at the number 12 and counts backwards in multiples of four beyond zero, she will say "minus 3". Is she correct?		
If a 5-a-side football pitch has a perimeter of 134m and one side is 42m, the other must be 25m. Is that correct?		
In five days, Jamie is going to the England Netball Schools Festival. She has worked out that is in 125 hours. Is she correct?		
Jai has £3.25 to spend at the basketball tournament. He wants to buy a pack of chocolate bars for £1.79, a jumbo bag of crisps for £1.10 and a drink for 30p. He thinks he has enough money. Is he correct?		
Layla needs two dozen tennis balls and can buy them in packs of three. She has worked out she will need three packs. Is she correct?		
Piotr is saving towards a Leeds Utd Junior season ticket. The ticket costs £146. He has saved £109.50. He says this is $\frac{3}{4}$ of the price. Is he correct?		
Freya says that if one basketball weighs 482g, three balls will weigh 1kg 140g. Is she correct?		

If there are more incorrect answers than correct ones, the sack thief is male.

Circle one answer.

Answer to Clue 2: The sack thief is male/female.
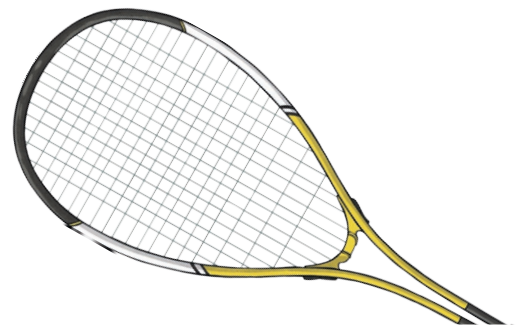
Clue 3: Favourite Sport Survey
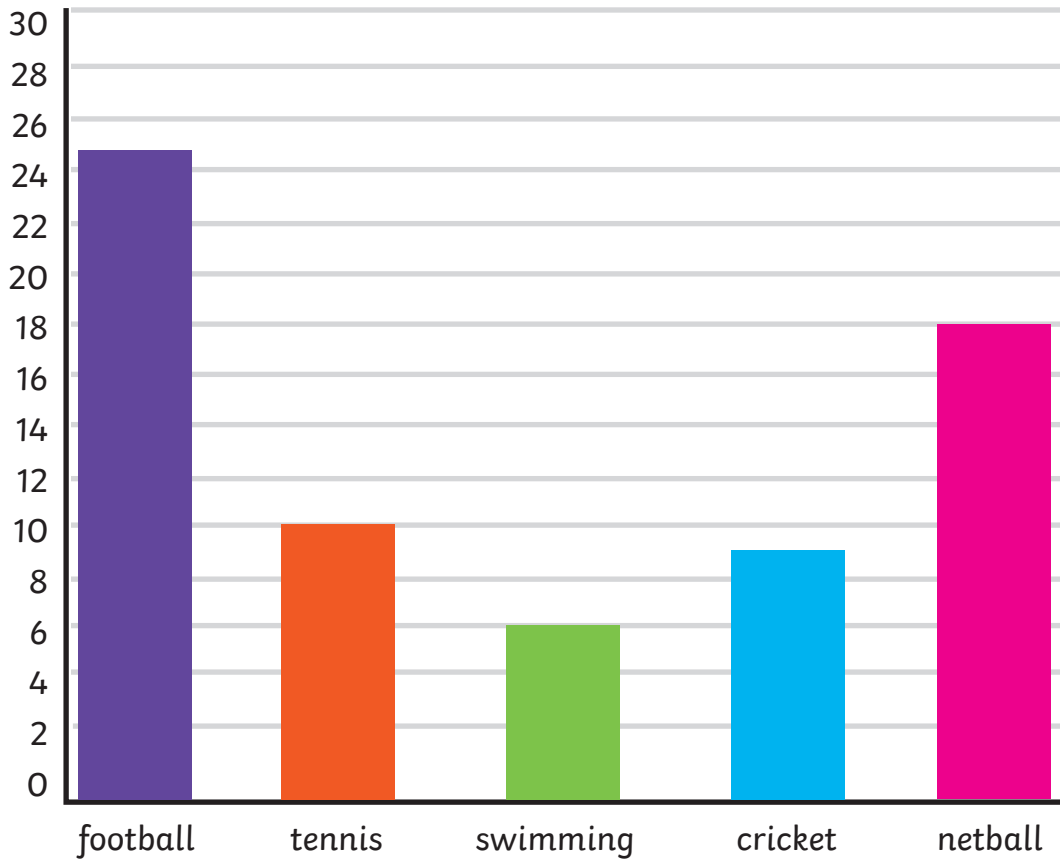
Some children were asked to name their preferred sport. Their answers are shown in the bar chart. Interpret the data to solve the clue.

1. Look at the most popular choice of sport. How many is that?

2. Look at the least popular choice of sport. How many is that?

3. How many more people chose netball over tennis?

4. How many more chose football over cricket?

5. What is the difference between the number of people who chose tennis and the number who chose swimming?

6. How many people chose netball or tennis?

7. What is the difference between the most and least popular choice?

8. How many people were involved in the survey altogether?

22	16	10	28
red	found	blue	the
67	1	25	5
Fli	Zoosh	team	Whizz
6	19	15	8
in	hat	drink	was
18	4	68	12
yellow	cupboard	green	trainers

Answer to Clue 3:

_____

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Clue 4: How Many Ways?

Work out how many of these groups of coins add up to £5.87.

Then use the table to discover what sort of trainers the thief wore.

£5.87

	Tick	Trainers
I found one way to make £5.87		Fli
I found two ways to make £5.87		Jester
I found three ways to make £5.87		Whizz
I found four ways to make £5.87		Hooper

Answer to Clue 4:

The thief wore _____ trainers.

Clue 5: Common Answer

Answer these equations and work out which answer is the most frequent to help you solve the fifth and final clue.

1. 4 × 4 = ☐   5. 48 ÷ 4 = ☐   9. 54 ÷ 6 = ☐   13. 10 × 5 = ☐

2. 18 ÷ 3 = ☐   6. 6 × 4 = ☐   10. 96 ÷ 8 = ☐   14. 8 × 2 = ☐

3. 28 ÷ 7 = ☐   7. 12 × 2 = ☐   11. 2 × 6 = ☐   ☐

4. 18 ÷ 3 = ☐   8. 7 × 6 = ☐   12. 60 ÷ 5 = ☐   ☐

Most frequent answer	Favourite drink
16	Zoosh
24	Juice Blast
12	PowerUp
4	Coola

Answer to Clue 5:

The thief's favourite drink was _____.

Have you solved the Mystery of the Missing Sacks?

The sack thief of St. Peter's Academy, is _____.
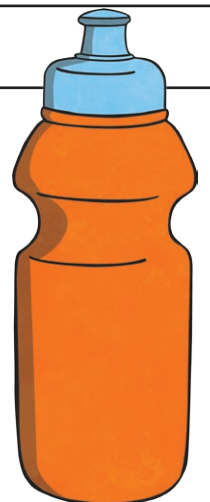
The Mystery of the Missing Sacks on Sports Day - Answers

Clue 1

The sack thief was in year four.

549 Zoosh	**333 thief**	491 female
692 sack	210 male	898 three
219 in	103 trainer	**391 the**
323 bottle	**209 was**	782 Hooper
888 Four	439 found	**539 year**

Clue 2

The thief was **male.**

	Yes	No
Mia says that if she starts at the number 12 and counts backwards in multiples of four beyond zero, she will say "minus 3". Is she correct?		✓
If a 5-a-side football pitch has a perimeter of 134m and one side is 42m, the other must be 25m. Is that correct?	✓	
In five days, Jamie is going to the England Netball Schools Festival. She has worked out that is in 125 hours. Is she correct?		✓
Jai has £3.25 to spend at the basketball tournament. He wants to buy a pack of chocolate bars for £1.79, a jumbo bag of crisps for £1.10 and a drink for 30p. He thinks he has enough money. Is he correct?	✓	
Layla needs two dozen tennis balls and can buy them in packs of three. She has worked out she will need three packs. Is she correct?		✓
Piotr is saving towards a Leeds Utd Junior season ticket. The ticket costs £146. He has saved £109.50. He says this is $\frac{3}{4}$ of the price. Is he correct?	✓	
Freya says that if one basketball weighs 482g, three balls will weigh 1kg 140g. Is she correct?		✓

Clue 3
Team hat found in the cupboard was green.

22 red	**16** **found**	10 blue	**28** **the**
67 Fli	1 Zoosh	**25** **team**	5 Whizz
6 **in**	**19 hat**	15 drink	**8** **was**
18 yellow	**4** **cupboard**	**68** **green**	12 trainers

Clue 4
I found two ways to make **£5.87**
The thief wore **Jester trainers.**

Clue 5
The most frequent answer is **12.**

The thief's favourite drink was **PowerUp.**

The sack thief at St. Peter's Academy is **Sebastian Simpson.**