

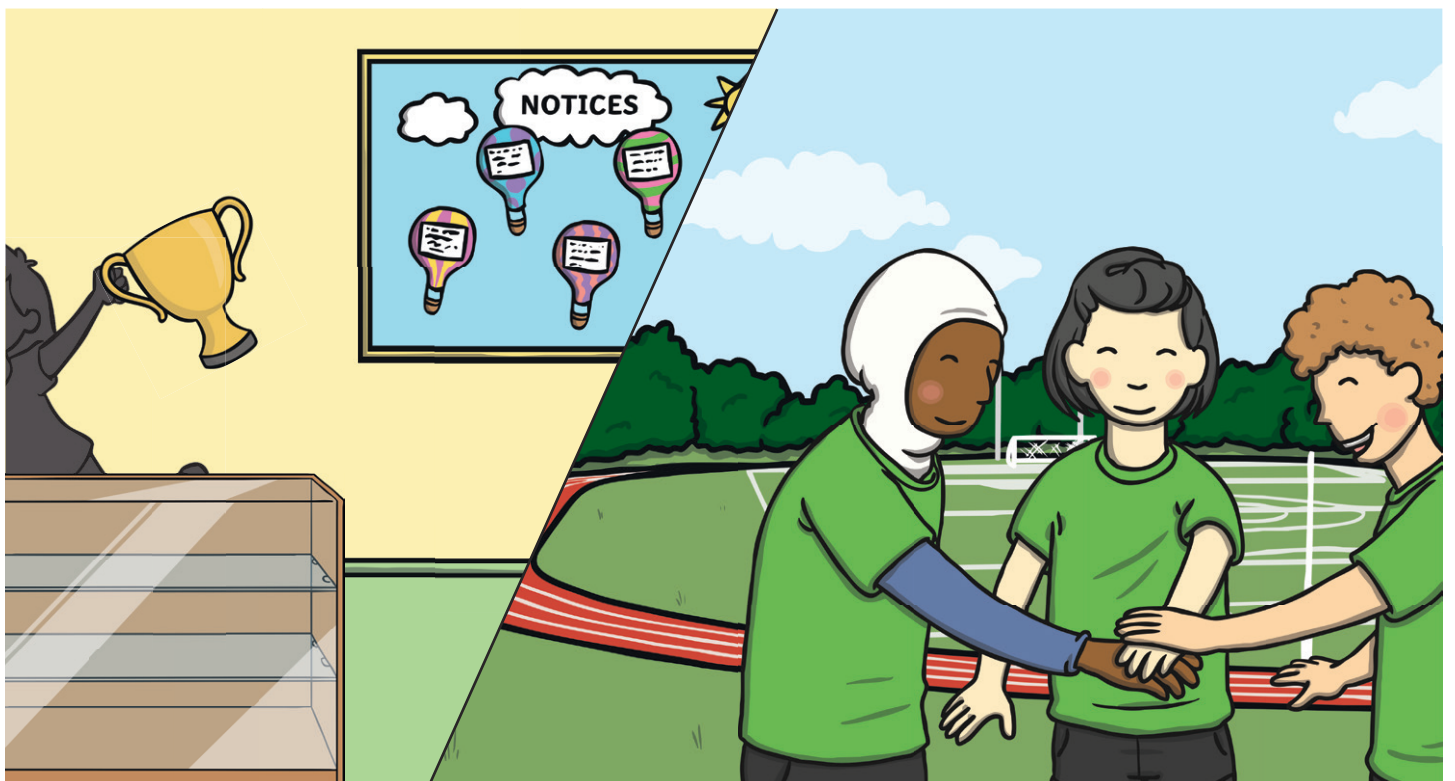
# Longthorne Primary School Sports Day Trophy Thief

The pupils of Longthorne Primary School always look forward to Sports Day. They love being out of the classroom and racing each other in their school teams. If their team wins, they are presented with a super Longthorne Primary Sports Day trophy!

The parents are gathering on the hill to watch; the teachers are all looking a little frazzled. The children are raring to go!

But wait! There has been a disaster! Mrs Bertram, the headteacher, has gone to the cupboard where the trophy is kept and it has gone!

As Chief Inspector, it is your job to take down the details of all the suspects who were seen near the trophy cupboard just before the big event, and solve the five clues, to work out who is the Sports Day trophy thief!



Name	Male or Female	Year Group	Team Colour	Type of water bottle	Shoe size
Lydia	F	1	blue	metal	8
Brett	M	2	blue	plastic	8
Suzie	F	1	blue	plastic	4
Tilly	F	3	red	metal	5
Anas	M	1	green	plastic	5
Piotr	M	3	yellow	metal	10
Sadie	F	3	blue	metal	8
Marta	F	3	yellow	plastic	9
Ben	M	3	green	plastic	10
Usman	M	1	blue	metal	4
Lan	F	3	red	plastic	10
Harry	M	2	green	metal	8
Freya	F	3	red	metal	4
Mollie	F	3	blue	metal	9
Shi	M	2	blue	metal	8
Frederick	M	3	green	plastic	10
Ross	M	1	green	plastic	5
Nancy	F	3	red	metal	9
Zachary	M	2	yellow	metal	8
Meeta	F	2	blue	plastic	9

# Clue 1: Which Material?

A water bottle was dropped by the thief near the trophy cupboard.

Here are some different types of sports balls. Their weight is given in grams.

Compare the weight of the different balls, and use  $<$  or  $>$  in the boxes below, to show which of the balls is heavier. If there are more  $<$  signs, then the water bottle was made of metal



400g



300g



100g











600g









50g



30g

-   
-   
-   
-   

-   
-   
-   

Answer to Clue 1:

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# Clue 2: Take It Away

Work out the missing numbers in each calculation. Then, find the numbers in the key below and rearrange them to make a sentence.

1.  $20 - 5 = \square$

4.  $70 - \square = 40$

2.  $10 - \square = 5$

5.  $90 - \square = 30$

3.  $100 - \square = 10$

4 male	30 trophy	50 shoe	60 was
5 thief	20 sports	15 the	90 female

Answer to Clue 2:

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# Clue 3: Add the Coins

Find out how many of these groups of coins add up to £1.50.

Then, use the table at the bottom to see which year group the trophy thief is from.

**£1.50**

The diagram consists of a central circle labeled "£1.50". Six lines radiate from this central circle to six surrounding circles, each containing a different set of coins. Each of these six circles has a small empty rectangular box next to it for an answer.

- Top circle:** Three 50p coins. (Box: )
- Top-left circle:** Two 50p coins, three 10p coins, one 2p coin, one 1p coin, and one 5p coin. (Box: )
- Top-right circle:** One 1p coin and one 50p coin. (Box: )
- Bottom-left circle:** One 1p coin, one 2p coin, one 5p coin, and four 10p coins. (Box: )
- Bottom circle:** One 50p coin, two 20p coins, four 10p coins, and two 5p coins. (Box: )
- Bottom-right circle:** One 50p coin, five 10p coins, one 5p coin, and two 2p coins. (Box: )

	Tick	Year
I found two ways to make £1.50		1
I found three ways to make £1.50		2
I found four ways to make £1.50		3











Answer to Clue 3:

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# Clue 4: The Right Direction

A footprint was discovered beside the trophy cupboard!

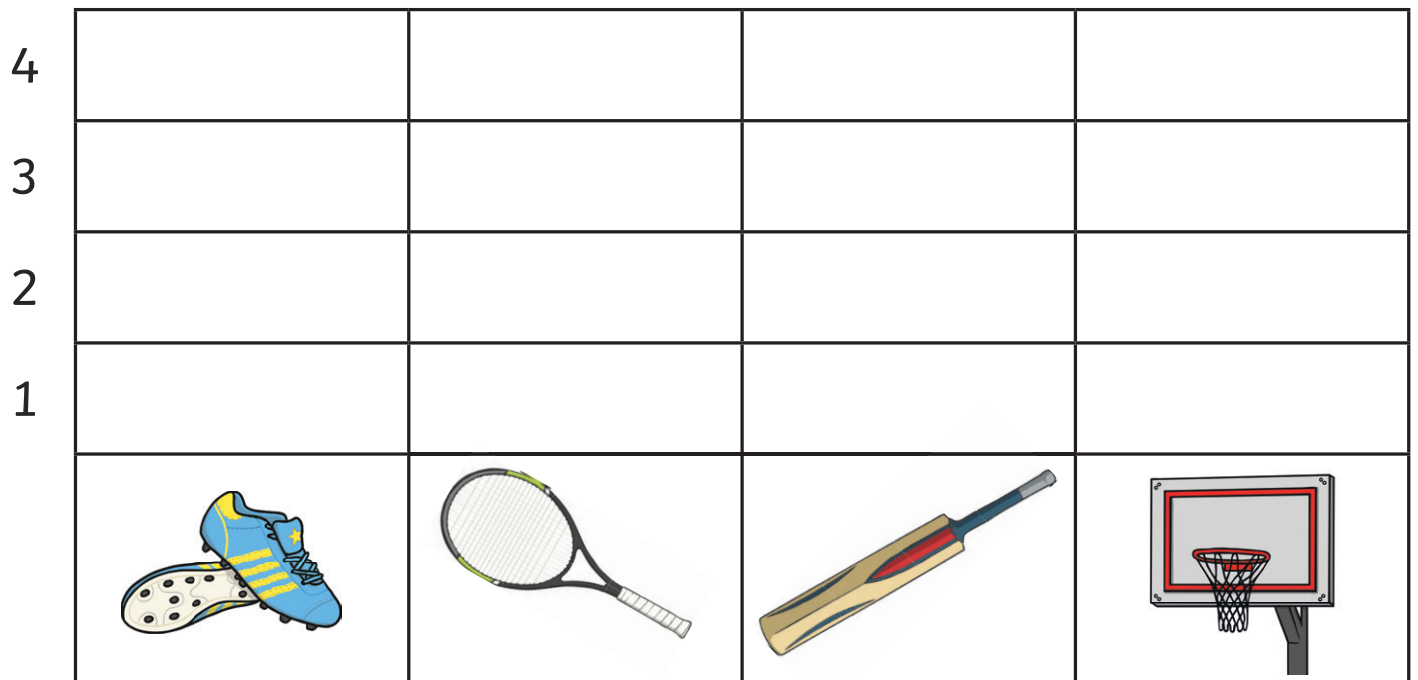
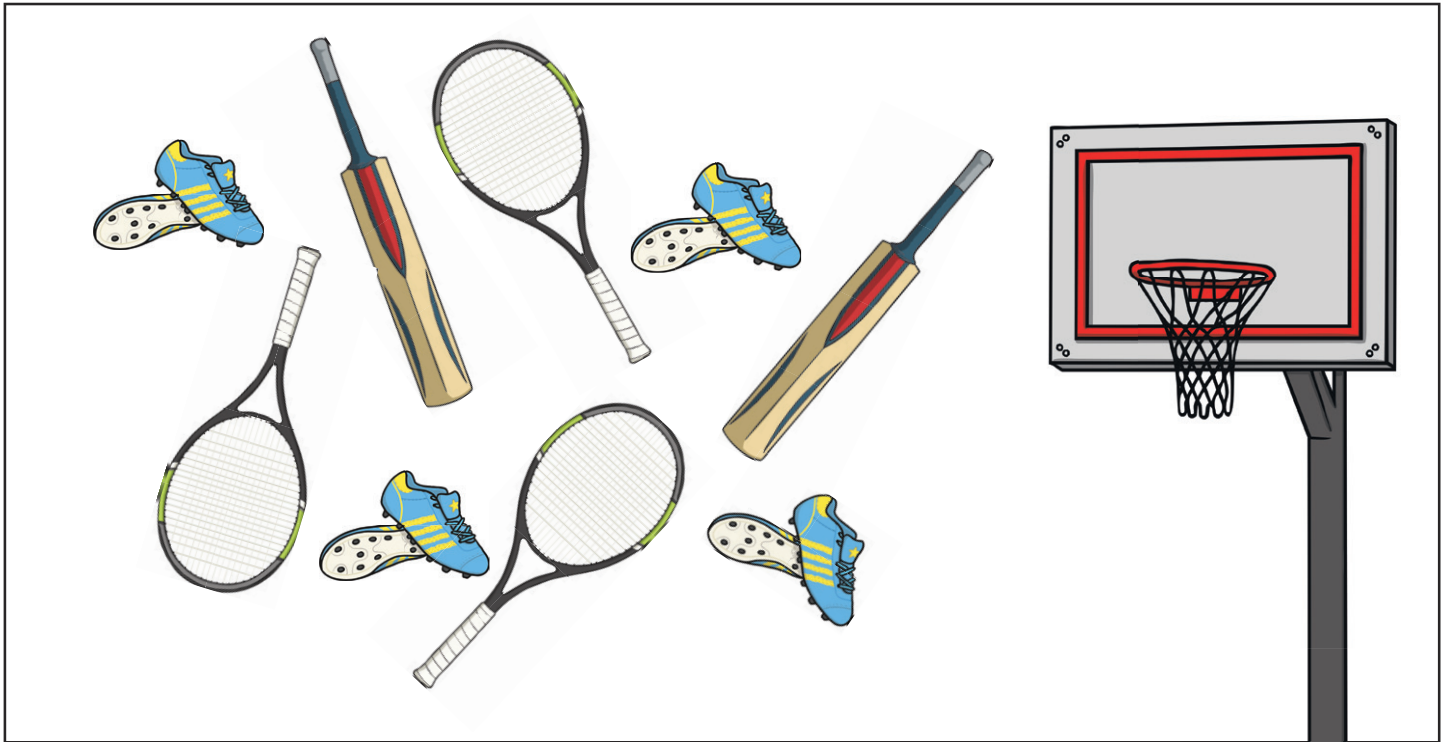
Use the instructions below to solve clue number 4. The instructions will take you to the square which will tell you what size shoes the trophy thief had.

	 Size 4					
						 Size 5
				 Size 8		
		 Size 10				
↑ X						 Size 9

1. Start at X.
2. Move 2 squares forward.  
Turn right.
3. Move 1 square forward.  
Turn left.
4. Move 1 square forward.  
Turn right.
5. Move 5 squares forward.  
Turn right.
6. Move 3 squares forward.
7. You have reached the answer!
8. The shoe size of the thief is \_\_\_\_\_.

# Clue 5: Sort It Out

Count the sports equipment and complete the bar graph. Then, answer the questions on the next page.



### Clue 5: Sort It Out

Find the answers in the key, then rearrange the words to make a sentence which tells you which team the thief played for.

1. Look at the equipment which appears the most. How many are there?

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2. Look at the equipment which appears the least. How many are there?

---

3. How many tennis rackets and pairs of football boots are there altogether?

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4. What is the difference between the number of tennis rackets and basketball hoops?

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5. How many more football shoes are there than nets?

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6. How many pieces of equipment are there altogether?

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7 played	11 red	3 thief	1 the
6 size	4 team	12 green	8 shoe
5 yellow	0 lost	2 for	10 blue

Answer to Clue 5:

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## Have you solved the mystery of the trophy thief?

It is \_\_\_\_\_!



# Clue 1: Which Material? - Answers

A water bottle was dropped by the thief near the trophy cupboard.

Here are some different types of sports balls. Their weight is given in grams.

Compare the weight of the different balls, and use  $<$  or  $>$  in the boxes below, to show which of the balls is heavier. If there are more  $<$  signs, then the water bottle was made of metal



400g



30g



100g











600g









50g



30g

-    $>$   
-    $<$   
-    $<$   
-    $>$   

-    $<$   
-    $>$   
-    $<$   

Answer to Clue 1:

**There are more  $<$  signs. The water bottle was metal.**

# Clue 2: Take It Away - Answers

Work out the missing numbers in each calculation. Then, find the numbers in the key below and rearrange them to make a sentence.

1.  $20 - 5 = \boxed{15}$

4.  $70 - \boxed{30} = 40$

2.  $10 - \boxed{5} = 5$

5.  $90 - \boxed{60} = 30$

3.  $100 - \boxed{90} = 10$

4 male	30 trophy	50 shoe	60 was
5 thief	20 sports	15 the	90 female

Answer to Clue 2:

**The trophy thief was female.**

# Clue 3: Add the Coins - Answers

Find out how many of these groups of coins add up to £1.50.

Then, use the table at the bottom to see which year group the trophy thief is from.

The diagram shows a central circle labeled **£1.50** connected to six other circles, each containing a different combination of UK coins and a label:

- £1.40** (top-left): 2 x 50p, 4 x 10p, 2 x 5p, 1 x 2p
- £1.50** (top): 3 x 50p
- £1.50** (top-right): 1 x 1p, 1 x 50p
- £1.50** (right): 1 x 50p, 4 x 10p, 2 x 5p, 2 x 2p
- £1.50** (bottom-right): 1 x 50p, 4 x 10p, 2 x 5p, 2 x 2p
- £1.30** (bottom): 1 x 50p, 2 x 20p, 3 x 10p, 2 x 5p

	Tick	Year
I found two ways to make £1.50		1
I found three ways to make £1.50		2
I found four ways to make £1.50	✓	3











Answer to Clue 3:

**The thief is from year 3.**

# Clue 4: The Right Direction - Answers

A footprint was discovered beside the trophy cupboard!

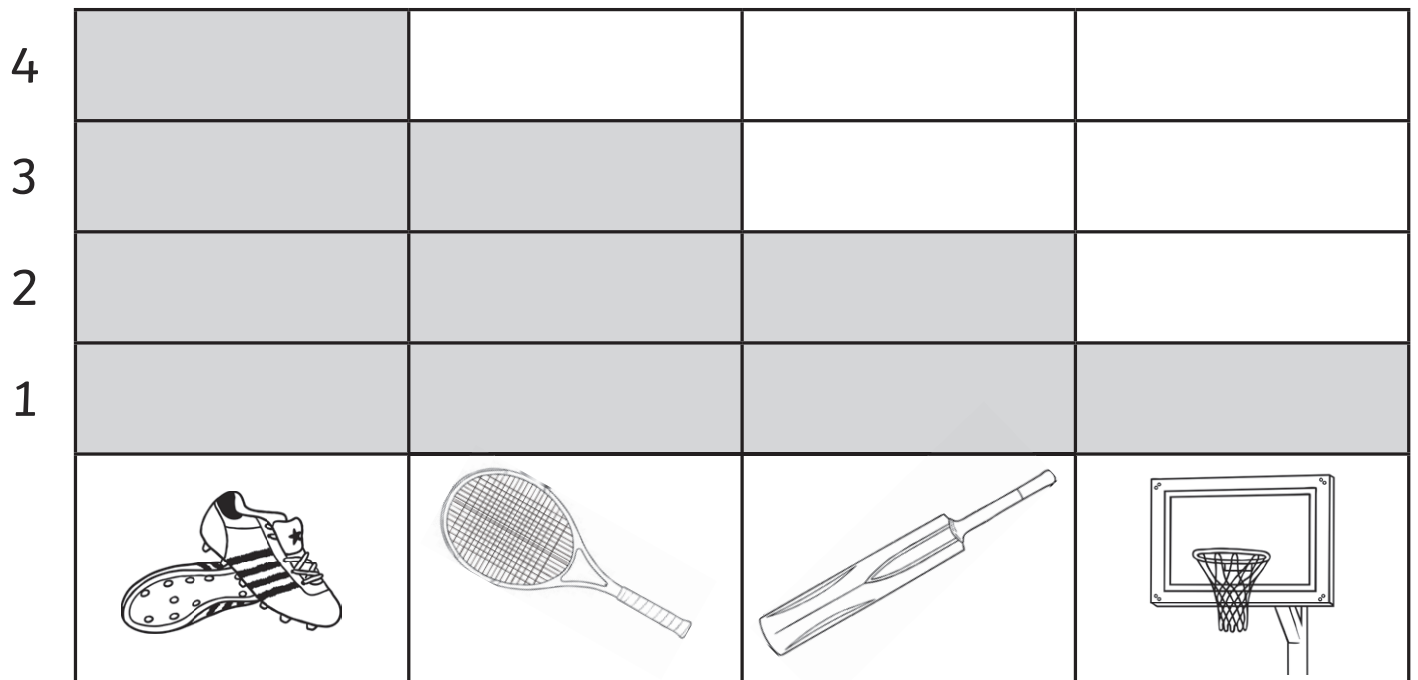
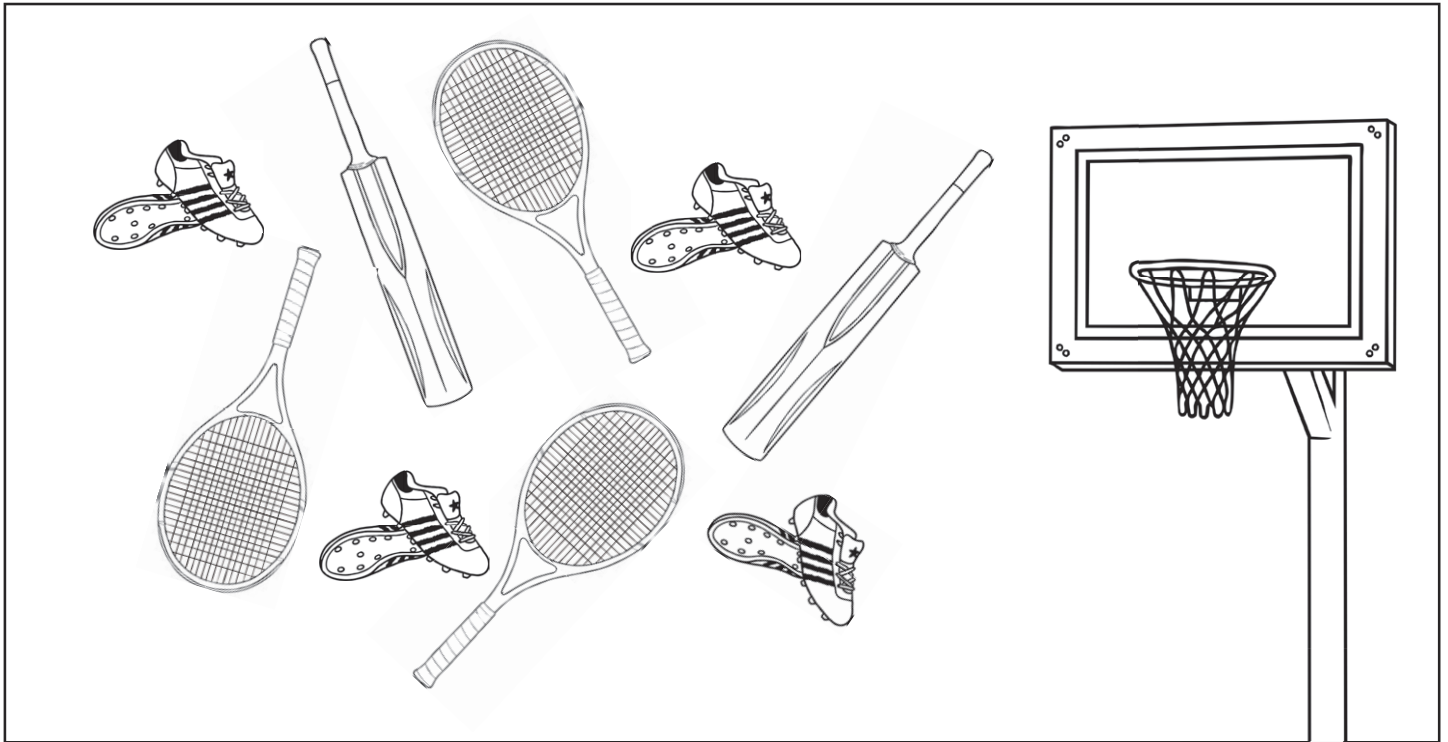
Use the instructions below to solve clue number 4. The instructions will take you to the square which will tell you what size shoes the trophy thief had.

	 Size 4					
	→	→	→	→	→	 ↓ Size 5
→	↑			 Size 8		↓
↑		 Size 10				↓
↑ X						 Size 9

1. Start at X.
2. Move 2 squares forward.  
Turn right.
3. Move 1 square forward.  
Turn left.
4. Move 1 square forward.  
Turn right.
5. Move 5 squares forward.  
Turn right.
6. Move 3 squares forward.
7. You have reached the answer!
8. The shoe size of the thief is **Size 9.**

# Clue 5: Sort It Out - Answers

Count the sports equipment and complete the bar graph. Then, answer the questions on the next page.



### Clue 5: Sort It Out - Answer

Find the answers in the key, then rearrange the words to make a sentence which tells you which team the thief played for.

1. Look at the equipment which appears the most. How many are there?  
**4**
2. Look at the equipment which appears the least. How many are there?  
**1**
3. How many tennis rackets and pairs of football boots are there altogether?  
**7**
4. What is the difference between the number of tennis rackets and basketball hoops?  
**2**
5. How many more football shoes are there than nets?  
**3**
6. How many pieces of equipment are there altogether?  
**10**

7 played	11 red	3 thief	1 the
6 size	4 team	12 green	8 shoe
5 yellow	0 lost	2 for	10 blue

Answer to Clue 5:

**The thief played for the blue team.**

**Have you solved the mystery of the trophy thief?**

It is **Mollie!**