## The Back to School Mystery of the Missing Pencil Cases Maths Game

The pupils at St. Miranda's Infant School are excited to be back after the summer holidays. They have missed their friends and are looking forward to catching up with each other again, wearing clean PE kits and shiny shoes, and using their wonderful new pencil cases for the start of the new school year!

However, disaster has struck! During lunchtime, a cheeky person has sneaked into school and taken everyone's new pencil cases! Lydia's fluffy green case with a monster face has gone; Waqas' Star Wars pencil tin has vanished and Harry's emoji pencil tin is nowhere to be seen!

As you can imagine, everyone is very upset!
Your task is to solve the clues and work out the mystery of the missing pencil cases.

Good luck!


| Name | M/F | Hair Colour | Mode of Transport | Type of Fruit Snack | Favourite Football Team |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Narinder | M | dark | walks | orange | Manchester United |
| Mario | M | light | car | apple | none |
| Leah | F | light | car | strawberries | Liverpool |
| Klaudia | F | light | car | apple | Manchester United |
| Jacob | M | dark | walks | orange | Chelsea |
| Isaac | M | light | car | cherries | Liverpool |
| Hai | M | dark | car | cherries | Chelsea |
| Gurvinder | F | dark | car | orange | Aston Villa |
| Frankie | M | light | walks | cherries | Manchester United |
| Emil | M | light | car | apple | Liverpool |
| Dilek | F | light | walks | orange | none |
| Carter | M | dark | car | cherries | Liverpool |
| Bana | F | light | walks | apple | Manchester United |
| Amelia | F | light | walks | orange | Manchester United |
| Olivia | F | light | car | strawberries | Liverpool |
| Preet | M | dark | car | strawberries | Chelsea |
| Ruby | F | light | car | cherries | Liverpool |
| Sebastian | M | light | car | strawberries | Chelsea |
| Tomas | M | dark | car | apple | Manchester United |
| Usman | M | dark | walks | cherries | Liverpool |
| Violet | F | light | car | apple | Liverpool |

## Clue 1

## Missing Numbers

Fill in the missing numbers and colour the numbers you used in the table below. Put the words into a sentence to solve the first clue.


11, 12,



7, 6, 5,



10, $\bigcirc, 8,7,6$,


15, 14, 13,



| 20 <br> walks | 12 <br> pencil | 0 <br> under | 9 <br> thief | 4 <br> in |
| :---: | :---: | :---: | :---: | :---: |
| 13 <br> case | 2 <br> male | 8 <br> goes | 11 <br> car | 10 <br> female |
| 5 |  |  |  |  |
| to | 3 <br> the | 7 <br> school | 15 <br> found | $a$ |

Answer to clue 1: $\qquad$
$\qquad$

## Clue 2

## How Many Sharpeners?

Here are some pencil sharpeners. How many more sharpeners do you need to add to make 20 altogether?

Write your answers in the empty boxes.
Find the answers in the table below. Colour in the numbers you have used. Put the words into a sentence to solve the second clue.


Answer to clue 2: $\qquad$

Add these coins together.


If the coins added together to make these totals, the thief is male:
25p $35 p \quad 12 p \quad 16 p$

If the coins added together to make these totals, the thief is female:
35p
25p
15p
21p

## Answer to clue 3:

The thief is male/female

## Clue 4

## What Shape Am I?

Match up the descriptions with the shapes. Then, use the words to make a sentence.

I have four sides and four vertices.
All my sides are the same length.


I have one curved side and no vertices.


I have four sides. Two sides are short and two sides are long.

I have five sides, all the same length, and five vertices.

I have three sides and three vertices.


I have six sides, all the same length, and six vertices.


Answer to clue 4: $\qquad$

## Clue 5

## What's in My Pencil Case?

A survey was done on the contents of some pencil cases.
Use the tally to complete the block graph then answer the questions.
Find the answers in the table below and solve the last clue.

| Object in a pencil case | tally | total |
| :--- | :---: | :---: |
| sharpener | HY |  |
| eraser | HY $\\|\\|$ |  |
| ruler | $\\|\\|$ |  |
| pencil | HY HY |  |
| gel pen | HY |  |

1. Look at the most common object. How many are there?
2. Look at the least common object. How many are there?
3. How many sharpeners and rulers are there altogether?
4. How many more erasers than gel pens are there?
5. What is the difference between the number of pencils and the number of rulers?
6. How many pencils and pencil sharpeners are there altogether?

| 7 <br> the | 9 <br> orange | 4 <br> peel |
| :---: | :---: | :---: |
| 2 <br> apple | 10 <br> stones | 8 <br> thief |
| 3 <br> dropped | 15 <br> cherry | 3 <br> some |

## Clue 5

## What's in My Pencil Case?

| 10 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 9 |  |  |  |  |  |
| 8 |  |  |  |  |  |
| 7 |  |  |  |  |  |
| 6 |  |  |  |  |  |
| 5 |  |  |  |  |  |
| 4 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 1 |  |  |  |  |  |
|  |  |  |  |  | a conemen |

Answer to clue 5:
Have you solved the mystery of the pencil case thief?
$\qquad$

Page 8 of 11

## Clue 1: Missing Numbers

$3,4,5,6,7,8,9$
$11,12,13,14,15,16$
$7,6,5,4,3,2$
$10,9,8,7,6,5$
$15,14,13,12,11,10$

| 20 <br> walks | 12 <br> pencil | 0 <br> under | 9 <br> thief | 4 <br> in |
| :---: | :---: | :---: | :---: | :---: |
| 13 <br> case | 2 <br> male | 8 <br> goes | 11 <br> car | 10 <br> female |
| 5 |  |  |  |  |
| to | 6 <br> the | 3 <br> school | 7 <br> found | 15 <br> $\mathbf{a}$ |

Answer to clue 1: The pencil case thief goes to school in a car.

## Clue 2: How Many Sharpeners?

| 11 <br> male | 16 <br> the | 12 <br> hair |
| :---: | :---: | :---: |
| 5 <br> coloured | 14 <br> lost | 2 |
| 9 |  |  |
| light | 10 | dark |

Answer to clue 2: The thief has light coloured hair.

## Clue 3: Adding Coins

The coins added together to make these totals so the thief is female:

$$
35 p \quad 25 p \quad 15 p \quad 21 p
$$

## Clue 4: What Shape Am I?

I have four sides and four vertices. All my sides are the same length.

I have one curved side and no vertices.

I have four sides. Two sides are short and two sides are long.

I have five sides, all the same length, and five vertices.

I have three sides and three vertices.

I have six sides, all the same length, and six vertices.


Answer to clue 4: A Liverpool key ring was found.

## Clue 5: What's in My Pencil Case?

| 7 <br> the | 9 <br> orange | 4 <br> peel |
| :---: | :---: | :---: |
| 2 <br> apple | 10 <br> stones | 8 <br> thief |
| 3 <br> dropped | 15 <br> cherry | 3 <br> some |

Answer to clue 5: The thief dropped some cherry stones.
Have you solved the mystery of the pencil case thief?
The pencil thief is Ruby.

