

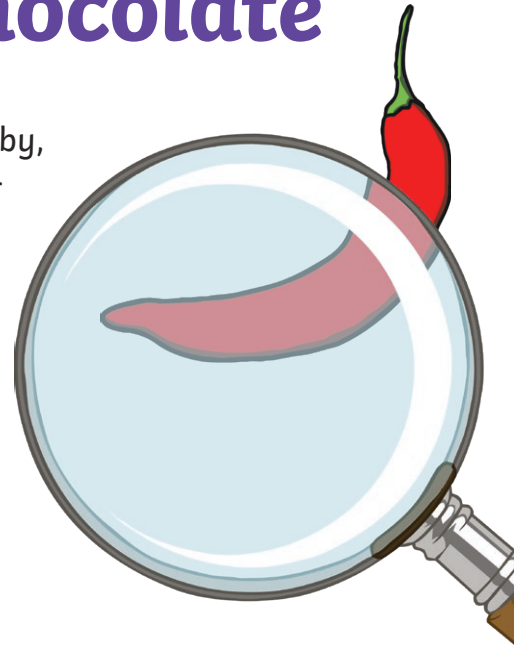
# The Mystery of the Contaminated Chocolate

The UK's leading chocolate manufacturer, Mega-Chocca-Dooby, had just finished testing their final batch of finest Easter eggs to be distributed around the UK when they found their tasters rushing, red in the face, for glasses of cold milk!

On closer inspection, the whole batch had been sabotaged when it was found that someone had poured chilli oil into the chocolate vats!

When the CCTV footage was viewed, all that could be seen was a hooded figure pouring in the oil in the dead of night.

So who was the perpetrator?



You are the Detective Inspector in charge of the investigation...

Solve the following clues to eliminate all-but-one of the following suspects based on their gender, height, eye colour, hair colour and the transport they use.

Good Luck... Mega-Chocca-Dooby is depending on you!

## The Mystery of the Contaminated Chocolate

| Name               | M/F | Height | Eye Colour | Hair Colour | Transport Used |
|--------------------|-----|--------|------------|-------------|----------------|
| Arthur Almond      | M   | 1.72m  | Blue       | ginger      | walk           |
| Anneke Anise       | F   | 1.83m  | Brown      | blonde      | car            |
| Brenda Buttercream | F   | 152cm  | Green      | black       | motorbike      |
| Brian Bonbon       | M   | 190cm  | Brown      | bald        | bus            |
| Celia Carob        | F   | 1.8m   | Brown      | ginger      | bicycle        |
| Clive Confection   | M   | 1850mm | Brown      | brown       | car            |
| Danny Drizzle      | M   | 1.85m  | Grey       | blonde      | bicycle        |
| Danuta Doublechoc  | F   | 1.7m   | Hazel      | blonde      | car            |
| Elsie Eatery       | F   | 158cm  | Blue       | grey        | walk           |
| Elias Eccles       | M   | 1.64m  | Green      | brown       | bicycle        |
| Fiona Fudge        | F   | 1.6m   | Blue       | ginger      | bicycle        |
| Freddie Fondue     | M   | 1.81m  | Blue       | bald        | motorbike      |
| Gordon Ganache     | M   | 191cm  | Hazel      | brown       | car            |
| Gemma Glucose      | F   | 176cm  | Brown      | blonde      | bicycle        |
| Harold Honey       | M   | 1.89m  | Brown      | grey        | bicycle        |
| Heidi Hazelnut     | F   | 1.77m  | Green      | black       | car            |
| Iris Icing         | F   | 164cm  | Blue       | ginger      | walk           |
| Ian Icecream       | M   | 1.84m  | Hazel      | brown       | walk           |
| Joe Jammy          | M   | 1.8m   | Green      | ginger      | motorbike      |
| Janine Jelly       | F   | 159cm  | Blue       | brown       | bicycle        |
| Katie Kremery      | F   | 1.69m  | Grey       | blonde      | car            |
| Kevin Kiwi         | M   | 1.62m  | Brown      | brown       | bus            |
| Leonard Lemony     | M   | 1780mm | Blue       | bald        | car            |
| Leanne Lime        | F   | 1.59m  | Green      | brown       | walk           |
| Mike Mocha         | M   | 172cm  | Hazel      | black       | bicycle        |
| Millie Muffin      | F   | 1.66m  | Blue       | ginger      | motorbike      |
| Noah Nougat        | M   | 1840mm | Brown      | ginger      | motorbike      |
| Nuala Nutmeg       | F   | 163cm  | Hazel      | brown       | walk           |
| Olivia Ombre       | F   | 1.6m   | Brown      | blonde      | bicycle        |
| Otis Orange        | M   | 1700mm | Blue       | blond       | car            |
| Paula Pavlova      | F   | 166cm  | Green      | grey        | motorbike      |
| Patrick Praline    | M   | 1.65m  | Brown      | bald        | walk           |

## Clue 1

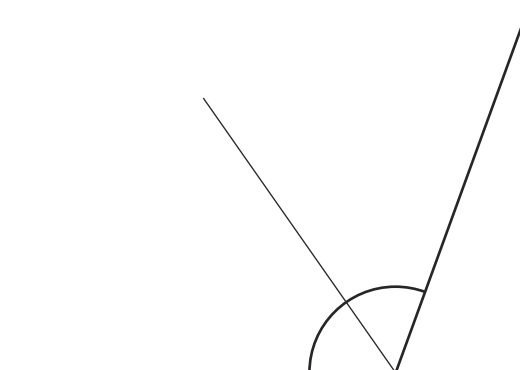
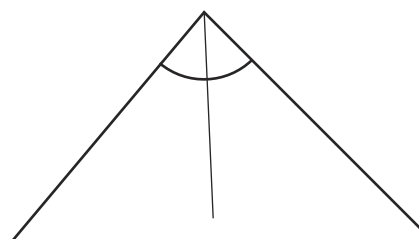
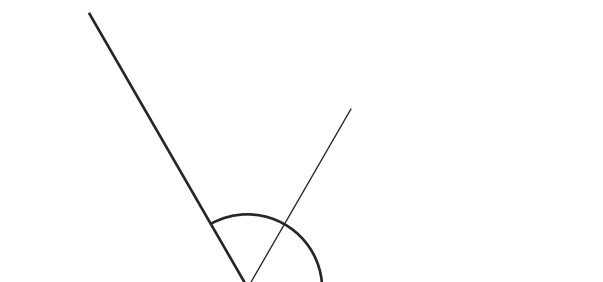
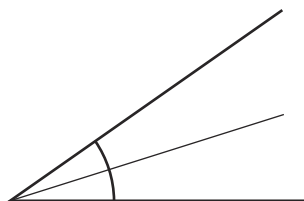
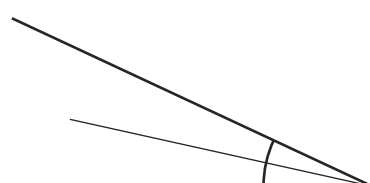
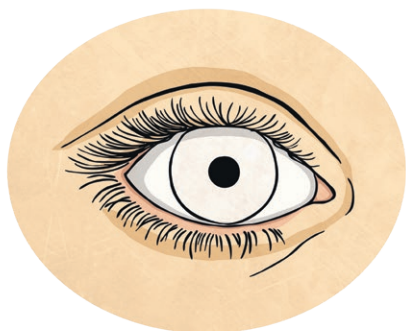
Your detectives have worked out that to reach the chocolate vats you need to be over a certain height. That height in millimetres will be the number that is the odd one out from these calculation answers. Unfortunately, some wise guy has put them into Roman Numerals so you'll have to translate them first...



|    |   |   |   |   |   |   |   |   |   |   |   |   |
|----|---|---|---|---|---|---|---|---|---|---|---|---|
| a) | C | C | L | I | I | I | x | I | V |   |   |   |
| b) | M | C | M | X | C | V | - | C | C | X | L | V |
| c) | M | M | M | X | X | X | V | I | ÷ | I | I | I |

## Clue 2

One of the CCTV cameras near the entrance of the factory was covered over by the hooded criminal, but unfortunately for them, the camera caught a glimpse of the colour of their eyes. Measure these angles, use the code cracker, pick one letter from each angle and rearrange the letters to find out the eye colour of our chocolate hooligan.



| Angle | Letters to choose from |
|-------|------------------------|
| 120°  | R or E                 |
| 85°   | A or O                 |
| 25°   | B or H or U            |
| 15°   | G or Z                 |
| 35°   | L or W                 |
| 110°  | N or Y                 |

## Clue 3

Outside the factory, your scene of crime officers (SOCOs) found something in the mud that tells them what you will need to work out from the fraction code below. The evidence is written in improper fractions and to solve it you need to find the letter with the matching whole or mixed number and write it down.

| A              | B              | C              | D              | E              | H              | I              | K               |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| 10             | $2\frac{1}{4}$ | $3\frac{1}{6}$ | 5              | $2\frac{1}{3}$ | $3\frac{1}{5}$ | $3\frac{3}{4}$ | $3\frac{1}{11}$ |
| L              | O              | P              | R              | S              | T              | U              | W               |
| $5\frac{2}{5}$ | $3\frac{3}{5}$ | 3              | $1\frac{1}{4}$ | $3\frac{1}{3}$ | $2\frac{2}{3}$ | $1\frac{1}{2}$ | $2\frac{3}{4}$  |

|                 |                 |                 |                |                 |
|-----------------|-----------------|-----------------|----------------|-----------------|
| $\frac{40}{15}$ | $\frac{32}{10}$ | $\frac{28}{12}$ | $\frac{19}{6}$ | $\frac{21}{14}$ |
|                 |                 |                 |                |                 |

|                |                |                |                 |                 |
|----------------|----------------|----------------|-----------------|-----------------|
| $\frac{27}{5}$ | $\frac{12}{4}$ | $\frac{10}{8}$ | $\frac{45}{12}$ | $\frac{40}{15}$ |
|                |                |                |                 |                 |

|                |                 |                |                 |                |
|----------------|-----------------|----------------|-----------------|----------------|
| $\frac{10}{8}$ | $\frac{45}{12}$ | $\frac{35}{7}$ | $\frac{28}{12}$ | $\frac{30}{9}$ |
|                |                 |                |                 |                |

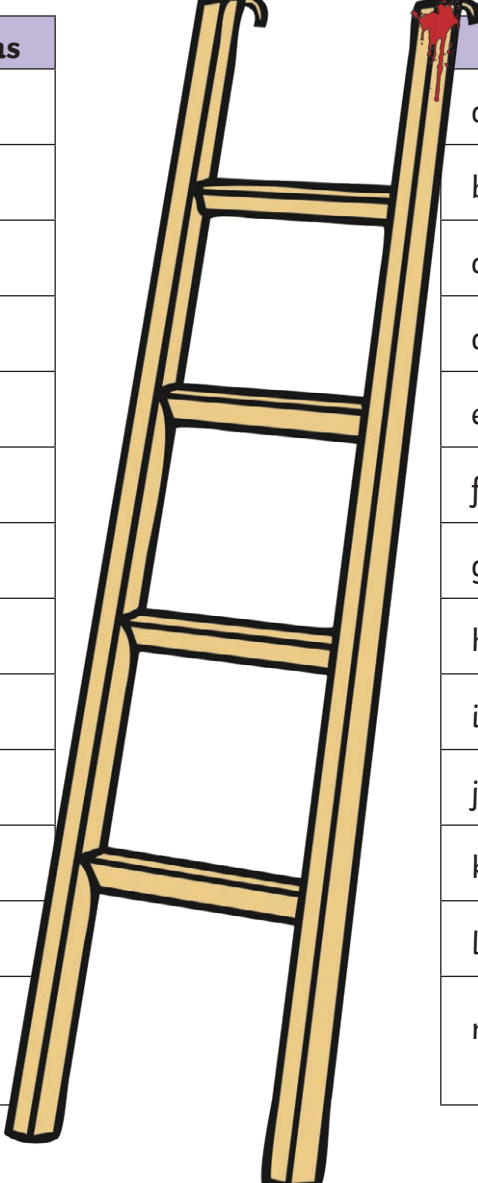
|                  |                 |                 |                 |                 |
|------------------|-----------------|-----------------|-----------------|-----------------|
| $\frac{100}{10}$ | $\frac{54}{24}$ | $\frac{45}{12}$ | $\frac{34}{11}$ | $\frac{28}{12}$ |
|                  |                 |                 |                 |                 |



## Clue 4

The SOCOs have done some more investigating and have found some blood where the wrongdoer cut themselves on the ladder to the chocolate vat. From that sample, they were able to determine something about the person. You can find their answer by solving the algebraic equations to find out the value of each letter below. Then you will be able to solve the clue.

| Algebraic Expressions | Answers |
|-----------------------|---------|
| $a + 7 = 10$          | $a =$   |
| $14 - b = 3 + 7$      | $b =$   |
| $a + b = c$           | $c =$   |
| $d + a = 8$           | $d =$   |
| $e - b = -2$          | $e =$   |
| $f^2 = 36$            | $f =$   |
| $6g = 6$              | $g =$   |
| $\sqrt{121} = h$      | $h =$   |
| $i = a^2$             | $i =$   |
| $ab = j$              | $j =$   |
| $k = e^3$             | $k =$   |
| $l = 2f + g$          | $l =$   |
| $\frac{j + k}{2} = m$ | $m =$   |

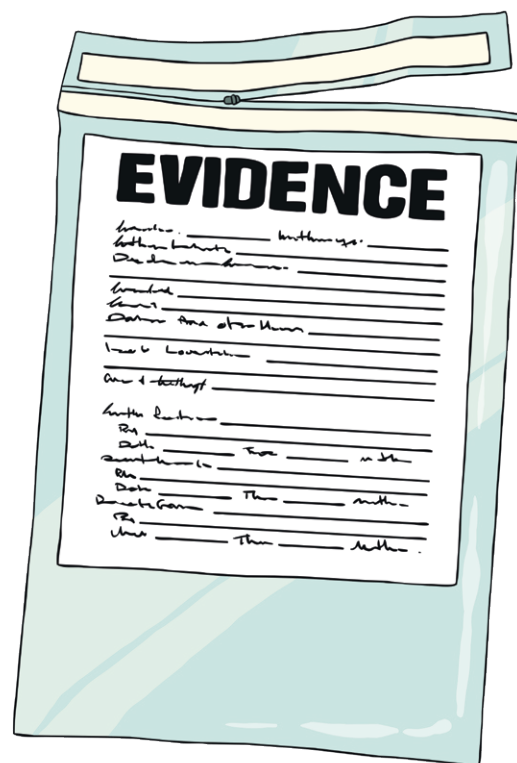


**Clue: 6, 2, 10, 3, 13, 2**

## Clue 5

The SOCOs have found one more piece of evidence that will finally tell us the identity of the offender. Use this jumbled up times tables square to crack the code below to discover their findings.

| x  | 2 | 5 | 7 | 3 | 10 | 8 | 6 | 4 | 1 | 9  |
|----|---|---|---|---|----|---|---|---|---|----|
| 6  | I | A | L | V | B  | K | D | C | J | "  |
| 9  | V | M | ! | T | \$ | Y | " | D | H | B  |
| 3  | J | S | U | H | A  | C | V | I | : | T  |
| 1  | Q | & | . | : | P  | W | J | X | Z | H  |
| 7  | F | G | @ | U | /  | O | L | ) | . | !  |
| 2  | X | P | F | J | R  | N | I | W | Q | V  |
| 8  | N | ? | O | C | #  | E | K | £ | W | Y  |
| 5  | P | ( | G | S | *  | ? | A | R | & | M  |
| 10 | R | * | / | A | %  | # | B | ? | P | \$ |
| 4  | W | R | ) | I | ?  | £ | C | N | X | D  |



|    |    |    |    |    |
|----|----|----|----|----|
| 30 | 42 | 56 | 16 | 35 |
|    |    |    |    |    |

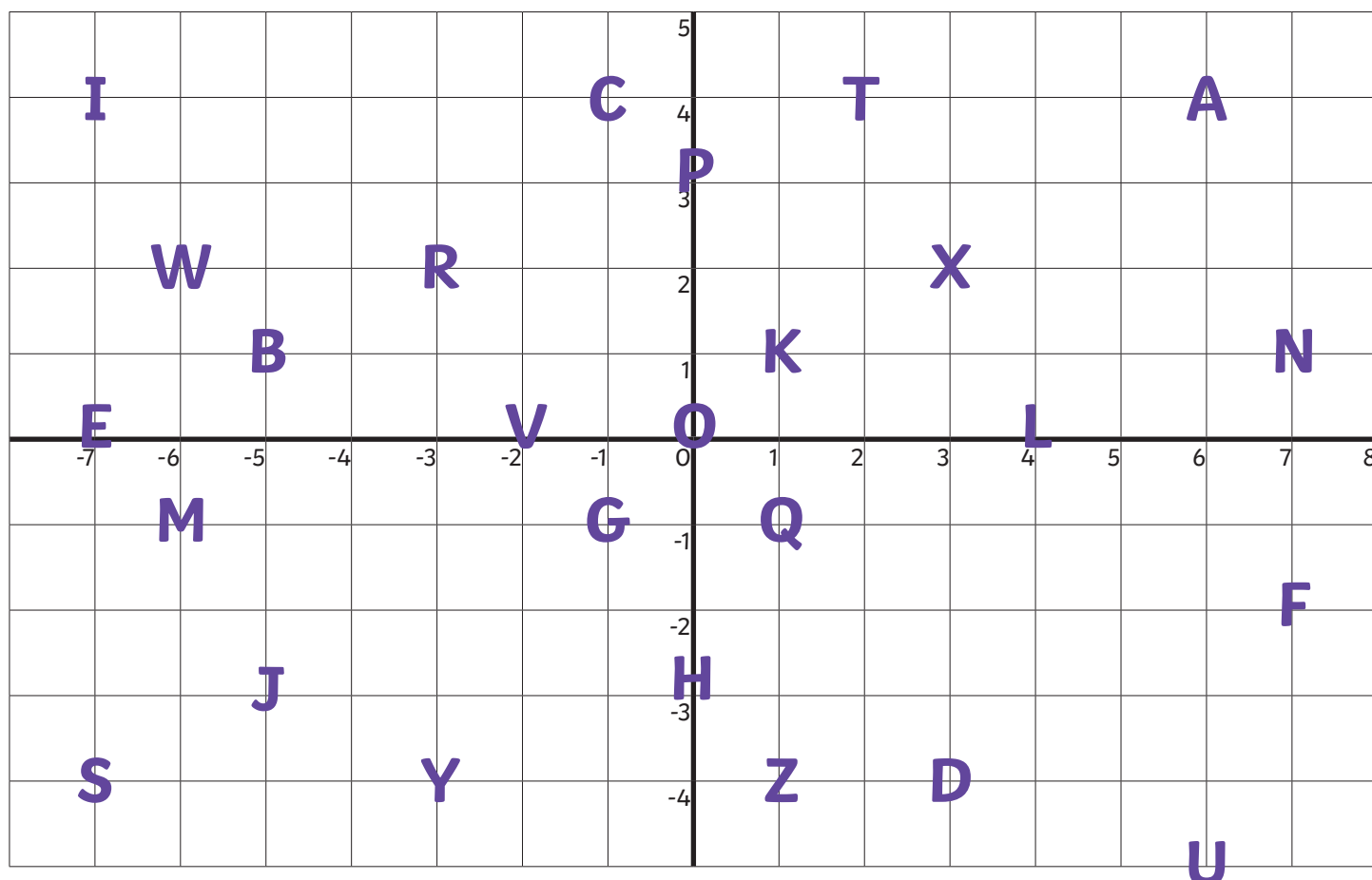
|    |    |    |    |    |    |
|----|----|----|----|----|----|
| 81 | 42 | 56 | 16 | 36 | 64 |
|    |    |    |    |    |    |

|   |    |    |    |    |
|---|----|----|----|----|
| 9 | 30 | 12 | 20 | 63 |
|   |    |    |    |    |

The Culprit: \_\_\_\_\_

# The Confession

When the trespasser was eventually caught and brought to face charges, they were asked about their motive. Solve the code below to find out what they said.



|               |               |              |              |              |               |
|---------------|---------------|--------------|--------------|--------------|---------------|
| <b>(-7,4)</b> | <b>(-6,2)</b> | <b>(6,4)</b> | <b>(7,1)</b> | <b>(2,4)</b> | <b>(-7,0)</b> |
|               |               |              |              |              |               |

|               |              |              |                |              |              |
|---------------|--------------|--------------|----------------|--------------|--------------|
| <b>(3,-4)</b> | <b>(2,4)</b> | <b>(0,0)</b> | <b>(-6,-1)</b> | <b>(6,4)</b> | <b>(1,1)</b> |
|               |              |              |                |              |              |

|               |               |              |              |               |               |
|---------------|---------------|--------------|--------------|---------------|---------------|
| <b>(-7,0)</b> | <b>(0,-3)</b> | <b>(0,0)</b> | <b>(2,4)</b> | <b>(-1,4)</b> | <b>(0,-3)</b> |
|               |               |              |              |               |               |

|              |               |              |              |              |              |               |
|--------------|---------------|--------------|--------------|--------------|--------------|---------------|
| <b>(0,0)</b> | <b>(-1,4)</b> | <b>(0,0)</b> | <b>(4,0)</b> | <b>(6,4)</b> | <b>(2,4)</b> | <b>(-7,0)</b> |
|              |               |              |              |              |              |               |