## The Place Value Mystery of the Thief at Gideon Gold's Chocolate Factory

Good evening. You join us here at the scene of the crime in Little Hadfield, at the factory of Gideon Gold, where the exclusive chocolates, Delectable Dream Drops, are created. Forensic police are investigating how this appalling crime has happened; they are taking down the descriptions of suspects and taking statements, as we speak!

At around 1.30 a.m. on Tuesday, someone broke into the factory and took the plans from the highly secure safe. Each member has had to sign a contract of secrecy and no one is allowed to be alone in the presence of the plans!

The suspect is an employee of Gold Chocolatiers Ltd. and must be found as soon as possible, before the plans are sold to rival companies!

Your task is to solve the clues and use the descriptions of the suspects to unmask the safe-cracker!


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| Name | M/F | Job in the Factory | Wears a Hat | Transport to Work | Size Shoe |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Ashael Able | m | packing | yes | car | 7 |
| Betsy Browne | f | taste tester | yes | car | 4 |
| Chi Chew | m | marketing | no | car | 8 |
| Dabinn Dray | f | production | yes | walks | 6 |
| Eben Emanuel | m | team leader | sometimes | cycles | 10 |
| Florence Flame | f | packing | yes | car | 7 |
| Gabriel Green | m | marketing | no | car | 7 |
| Horatio Hound | m | production | yes | bus | 8 |
| Isabella Isaac | f | packing | yes | car | 7 |
| Joss Jerry | f | production | yes | walks | 5 |
| Kamil Krill | m | team leader | sometimes | car | 10 |
| Lysander Leaf | m | production | yes | bus | 9 |
| Maria Mayes | f | taste tester | yes | car | 5 |
| Niamh Neve | f | packing | yes | car | 5 |
| Oswald Owen | m | team leader | sometimes | cycles | 8 |
| Phileas Fear | m | production | yes | cycles | 11 |
| Quinby Quarter | m | taste tester | yes | car | 12 |
| Ruth Raine | $f$ | production | yes | car | 6 |
| Scarlett Snow | $f$ | packing | yes | bus | 4 |
| Theo Thumb | m | marketing | no | car | 9 |
| Usha Umrani | $f$ | taste tester | yes | bus | 5 |
| Violet Vain | $f$ | packing | yes | car | 6 |
| Warren Whist | m | taste tester | yes | car | 11 |
| Xavier Xi | m | marketing | no | car | 10 |
| Yuri Yale | m | team leader | sometimes | walks | 8 |
| Zarin Zardari | $f$ | production | yes | walks | 5 |
| Nathaniel Newsome | m | production | yes | cycles | 9 |
| Wilhemina West | $f$ | marketing | no | car | 4 |
| Constance Corn | $f$ | marketing | no | car | 6 |
| Benedict Brew | m | taste tester | yes | bus | 11 |

The Place Value Mystery of the Thief at Gideon Gold's Chocolate Factory Clue 1
Work out what steps the sequences are going up or down in and fill in the missing numbers. Take the last number in each row, find it in the table below and take note of the corresponding word. Once you have found all of the words, order them into a sentence to solve clue 1.


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| $220$ went | 45 <br> ticket | $\begin{gathered} 80 \\ \text { factory } \end{gathered}$ | $\begin{aligned} & 21 \\ & \text { by } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| $20$ <br> bus | $\begin{gathered} 44 \\ \text { culprit } \end{gathered}$ | $350$ <br> was | 36 found |
| $\begin{aligned} & 35 \\ & \text { the } \end{aligned}$ | 90 <br> bike | $\begin{gathered} 200 \\ a \end{gathered}$ | $\begin{aligned} & 55 \\ & \text { to } \end{aligned}$ |
| $\begin{gathered} 75 \\ \text { clip } \end{gathered}$ | $\begin{aligned} & 250 \\ & \text { the } \end{aligned}$ | $\begin{aligned} & 58 \\ & \text { car } \end{aligned}$ | $\begin{gathered} 25 \\ \text { walked } \end{gathered}$ |

Answer to clue 1: $\qquad$


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## Clue 2

Use the $<,>$ and $=$ signs to compare the pairs of numbers.
If there are more $>$, the safe-breaker did not wear a hat.
If there are more <, the safe-breaker wore a hat.
If there are more $=$, the safe-breaker sometimes wore a hat.

| 245 |  | 254 |
| :--- | :--- | :--- |



| 6128 |  | 6119 |
| :--- | :--- | :--- |


| 4089 |  | 4098 |
| :--- | :--- | :--- |


| 6668 |  | 6599 |
| :--- | :--- | :--- |

Answer to clue 2: The culprit $\qquad$ .

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## Clue 3

Read the numbers in words then identify the correct calculation they equal and colour it in. Order the words with these calculations and solve clue number 3.

| five hundred and four | two thousand, six hundred <br> and thirty-two | seven hundred and three |
| :---: | :---: | :---: |
| four hundred and fifty-eight | nine hundred | three hundred and nine |



Answer to clue 3: $\qquad$

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## Cule 4

Make the largest four-digit number possible from each group of digits. Find these numbers in the table and order the words that go with them to solve clue number 4.

| 6210 <br> in | 7367 <br> marketing | 9762 <br> department |
| :---: | :---: | :---: |
| 8540 <br> thief | 8970 <br> shoe | 2965 <br> team |
| 9400 <br> near | 6540 <br> the | 1836 <br> manager |
| 5227 <br> production | 2007 <br> footprint | 9871 <br> worked |
| 9932 <br> plan | 4275 <br> lost | 8431 <br> the |
| size <br> size | 8542 <br> packing | 3766 <br> leader |


| 7 | 6 | 2 | 9 |
| :--- | :--- | :--- | :--- |
|  |  |  |  |


| 2 | 3 | 9 | 9 |
| :--- | :--- | :--- | :--- |
|  |  |  |  |


| 4 | 8 | 1 | 3 |
| :--- | :--- | :--- | :--- |
|  |  |  |  |


| 6 | 0 | 4 | 5 |
| :--- | :--- | :--- | :--- |
|  |  |  |  |


| 5 | 8 | 4 | 2 |
| :--- | :--- | :--- | :--- |
|  |  |  |  |


| 7 | 8 | 9 | 1 |
| :--- | :--- | :--- | :--- |
|  |  |  |  |


| 1 | 0 | 6 | 2 |
| :--- | :--- | :--- | :--- |
|  |  |  |  |


| 0 | 4 | 8 | 5 |
| :--- | :--- | :--- | :--- |
|  |  |  |  |

Answer to clue 4: $\qquad$

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## Clue 5

What is the value of the underlined numbers?

| $2 \underline{5} 89$ | $83 \underline{6} 8$ | $\underline{1567}$ | $30 \underline{4} 0$ | $99 \underline{9} 9$ | $7 \underline{6} 43$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $167 \underline{1}$ | $7 \underline{8} 58$ | $5 \underline{2} 87$ | $11 \underline{1} 3$ | $505 \underline{2}$ | $86 \underline{2} 0$ |


| 60 <br> plan | 800 <br> naughty | 200 <br> had | 30 <br> was |
| :---: | :---: | :---: | :---: |
| 2 <br> six | 6 <br> footprint | 4 <br> five | 1000 <br> chocolate |
| 100 <br> seven | 90 <br> the | 500 <br> very | 10 <br> were |
| 1 <br> feet | 400 <br> a | 30 und | 80 <br> shoe |
| which <br> thief | under | 20 |  |
| size |  |  |  |

Answer to clue 5: $\qquad$
Have you solved the mystery?
The safe-breaking chocolate plan thief is $\qquad$ .


## The Place Value Mystery of the Thief at Gideon Gold's Chocolate Factory - Answers

## Clue 1:

The culprit went to the factory by car.

| $220$ <br> went | 45 ticket | $\begin{gathered} 80 \\ \text { factory } \end{gathered}$ | $\begin{aligned} & 21 \\ & \text { by } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| $\begin{gathered} 20 \\ \text { bus } \end{gathered}$ | $\stackrel{44}{\text { culprit }}$ | $\begin{aligned} & 350 \\ & \text { was } \end{aligned}$ | 36 found |
| $\begin{aligned} & 35 \\ & \text { the } \end{aligned}$ | $\begin{gathered} 90 \\ \text { bike } \end{gathered}$ | $\begin{gathered} 200 \\ a \end{gathered}$ | $\begin{aligned} & 55 \\ & \text { to } \end{aligned}$ |
| $\begin{gathered} 75 \\ \text { clip } \end{gathered}$ | $\begin{aligned} & 250 \\ & \text { the } \end{aligned}$ | $\begin{aligned} & 58 \\ & \text { car } \end{aligned}$ | $\begin{gathered} 25 \\ \text { walked } \end{gathered}$ |

## Clue 2:

There are more < signs.
The culprit did wear a hat.

| $245<254$ | $632>626$ | $509<590$ |
| :---: | :---: | :---: |
| $1783>1738$ | $8020>8002$ | $379<397$ |
| $1803<1830$ | $2784=2784$ | $1007<1070$ |
| $6128>6119$ | $4089<4098$ | $6668>6599$ |

## Clue 3:

The naughty safe breaker was female.
$900=500+400=$ the
$703=650+53=$ naughty
$504=480+24=$ safe
$2632=630+2002=$ breaker
$458=420+38=$ was
$309=290+19=$ female

## Clue 4:

The plan thief worked in the packing department.

| 6210 <br> in | 7367 <br> marketing | 9762 <br> department |
| :---: | :---: | :---: |
| 8540 <br> thief | 8970 <br> shoe | 2965 <br> team |
| 9400 | 6540 |  |
| near | the | 1836 <br> manager |
| 5227 <br> production | 2007 <br> footprint | 9871 <br> worked |
| 9932 <br> plan | 4275 <br> lost | 8431 <br> the |
| 6208 | 8542 <br> packing | 3766 <br> size |

## Clue 5:

The very naughty chocolate plan thief had feet were which size six.

| 60 <br> plan | 800 <br> naughty | 200 <br> had | 30 <br> was |
| :---: | :---: | :---: | :---: |
| 2 <br> six | 6 <br> footprint | 4 <br> five | 1000 <br> chocolate |
| 100 <br> seven | 90 <br> the | 500 <br> very | 10 <br> were |
| 1 <br> feet | 8 <br> a | 400 <br> found | 80 <br> shoe |
| 600 <br> which | 40 <br> thief | 300 <br> under | 20 <br> size |

Have you solved the mystery?
The chocolate plan thief of Gideon Gold's chocolate factory was Violet Vain.

