# The Mystery of Mrs Claus' Christmas Cake

It is nearly Christmas at Santa's workshop. Everyone has been dashing around getting ready for Santa's busiest night of the year; the reindeer have been brushed and their harness is shining brightly, the elves have been wrapping, packing and stockpiling all the presents ready to be loaded onto the sleigh and Santa has checked his list twice!

Before the busyness truly begins, Mrs Claus likes to cook a traditional Christmas dinner as a thank you for everyone's hard work. The turkey is browning nicely in the oven, the roast potatoes are crisping up and the sprouts are ... well, doing what cooking sprouts do! Mrs Claus' enormous Christmas cake is legendary for being full of fruit. She spends hours rolling out the icing and making beautiful figurines of elves, Santa and the sleigh laden down with presents, which adorn the top of the cake.

But wait! What's this? Mrs Claus has gone into the larder to get the cake out ready for dinner, and discovered that someone has crept in and eaten most of it! Who would do such a dreadful thing?

Your task is to use the clues and the descriptions of the elf suspects and work out the identity of the Christmas-cake muncher!





| Name               | Gender | Job in the<br>Workshop | Type of Hat  | Type of Shoes | Favourite<br>Christmas Food |
|--------------------|--------|------------------------|--------------|---------------|-----------------------------|
| Bitsy Baubles      | F      | manufacture            | stripy red   | glittery      | sprouts                     |
| Tinsel Tazzy       | F      | manufacture            | all green    | with bells    | turkey                      |
| Dotty Ditto        | F      | packing                | spotty red   | with bells    | pigs in blankets            |
| Jingles Jazz       | М      | wrapping               | stripy red   | with bells    | turkey                      |
| Dash Dawdle        | М      | researcher             | stripy green | curly tips    | pigs in blankets            |
| Buddy Bumble       | М      | wrapping               | stripy red   | with bells    | turkey                      |
| Berry Brill        | F      | packing                | stripy green | glittery      | mince pies                  |
| Kringle Kingly     | М      | researcher             | spotty red   | pointed       | pigs in blankets            |
| Sugarplum Shine    | F      | manufacture            | all green    | with bells    | mince pies                  |
| Jinx Jangle        | М      | wrapping               | stripy red   | with bells    | sprouts                     |
| Noelle N           | F      | manufacture            | stripy red   | glittery      | mince pies                  |
| Mistletoe Magic    | м      | packing                | all green    | curly tips    | mince pies                  |
| Elfie Elf          | F      | wrapping               | stripy green | curly tips    | turkey                      |
| Tiny Teensy        | м      | manufacture            | stripy red   | with bells    | sprouts                     |
| Juniper Ju         | F      | researcher             | spotty red   | glittery      | pigs in blankets            |
| Snowball Schnitzel | м      | wrapping               | stripy red   | with bells    | sprouts                     |
| Belle Ball         | F      | packing                | all green    | glittery      | turkey                      |
| Merry May          | F      | packing                | stripy green | with bells    | sprouts                     |
| Buster Boo         | м      | manufacture            | spotty red   | curly tips    | mince pies                  |
| Frizzle Fizz       | м      | wrapping               | stripy red   | with bells    | mince pies                  |
| Sparkle Sprite     | F      | manufacture            | stripy green | glittery      | sprouts                     |
| Blitz Blam         | м      | wrapping               | stripy red   | with bells    | pigs in blankets            |
| Pepper Prina       | F      | wrapping               | stripy green | curly tips    | mince pies                  |
| Frosty Frank       | м      | wrapping               | stripy red   | with bells    | sprouts                     |
| Jazzy Jay          | м      | manufacture            | stripy green | pointed       | turkey                      |
| Kizzy Kit          | F      | packing                | spotty red   | glittery      | pigs in blankets            |
| Twinkle Twinny     | F      | researcher             | stripy red   | with bells    | mince pies                  |
| Winky William      | м      | manufacture            | all green    | curly tips    | turkey                      |
| Lizzy Lovely       | F      | researcher             | stripy red   | with bells    | pigs in blankets            |
| Pine Pop           | м      | packing                | stripy green | pointed       | mince pies                  |





## Clue 1: Elf Numbers

Complete the number statements. Find the missing numbers in the table below and use the words in a sentence to solve the first clue.



| 9      | 8        | 20    | 42      |
|--------|----------|-------|---------|
| from   | the      | curly | found   |
| 11     | 36       | 96    | 80      |
| larder | glittery | bell  | dropped |
| 12     | 10       | 5     | 4       |
| near   | α        | shoe  | a       |
| 60     | 48       | 90    | 2       |
| was    | pointed  | in    | not     |

Answer to Clue 1:\_\_\_\_\_





### Clue 2: Elven Code

Answer the questions and use the alphabet to help you spell out the answer to the second clue.

| abcdefghijklm12345678910111213nopqrstuvwxyz141516171819202122232425254516171819202122232425254516171819202122232425254551617181920212223242554555   | ,  |           |           |          |            |          |          |           |           |          |      |    |        |
|---|--|-----------|-----------|----------|------------|----------|----------|-----------|-----------|----------|------|----|--------|
| n  o  p  q  r  s  t  u  v  w  x  y  z    14  15  16  17  18  19  20  21  22  23  24  25  26    Answer  Letter    4 > 2  Answer  Letter    4 × 2  Answer  Letter    How many sides does a pentagon have?  Image: Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4">Colspan="4"    Answer  Letter    Answer  Letter    Answer  Colspan="4"    Answer  Letter    Letter<   | a  | b         | с         | d        | е          | f        | g        | h         | i         | j        | k    | l  | m      |
| 14  15  16  17  18  19  20  21  22  23  24  25  26    Answer  Letter    45 - 25  Answer  Letter    4 × 2  Answer  Letter    How many sides does a pentagon have?  Image: Colspan="4">Image: Colspan="4"    Image: Colspan="4" Image: Colspan="4">Image: Colspan="4" Image: Colspan="4">Image: Colspan="4" Image: Colspan="4" Imag   | 1  | 2         | 3         | 4        | 5          | 6        | 7        | 8         | 9         | 10       | 11   | 12 | 13     |
| Answer  Letter    45 - 25  Answer  Letter    4 × 2  Image: Constraint of the state of the  | n  | 0         | р         | q        | r          | s        | t        | u         | v         | w        | x    | y  | z      |
| 45 - 25Image: style sty | 14   | 15        | 16        | 17       | 18         | 19       | 20       | 21        | 22        | 23       | 24   | 25 | 26     |
| 4 × 2Image: space of the space o |  |           |           |          |            |          |          |           |           |          | Answ | er | Letter |
| How many sides does a pentagon have?Image: mathematical stress of the stre  | 45 - 25  |           |           |          |            |          |          |           |           |          |      |    |        |
| The number of hundreds in 6552.Image: sequence of 48m, what is the length of one side?Image: sequence of 48m, what is the length of one side? $\frac{1}{3}$ of 18Image: sequence of 48m, what is the length of one side?Image: sequence of 48m, what is the length of one side? $\frac{1}{3}$ of 18Image: sequence of 48m, what is the length of one side?Image: sequence of 48m, what is the length of one side? $\frac{1}{3}$ of 18Image: sequence of 48m, what is the length of one side?Image: sequence of 48m, what is the length of one side? $1501 - 1478$ Image: sequence of 48m, what is the length of one side?Image: sequence of 48m, what is the length of 50m, sequence of 55m, sequence of 55m, sequence of 55m, sequence of 55m, sequence of 57m, sequence  | 4 × 2  |           |           |          |            |          |          |           |           |          |      |    |        |
| If a square flower bed has a perimeter of 48m, what is the length of one<br>side?Image: state is a state    | How m  | any side  | es does a | a pentag | jon have   | ?        |          |           |           |          |      |    |        |
| side?Image: side of the second s  | The nu   | nber of   | hundred   | ds in 65 | 52.        |          |          |           |           |          |      |    |        |
| 1501 - 1478Image: set of the set of the money of minutes between 17:51 and 18:06.Image: set of the set of              |  | iare flov | ver bed   | has a pe | erimeter   | of 48m   | , what i | s the ler | ıgth of c | one      |      |    |        |
| The number of minutes between 17:51 and 18:06.Image: Constraint of the second sec  | $\frac{1}{3}$ of 18                              |           |           |          |            |          |          |           |           |          |      |    |        |
| XXV - VIIImage: constraint of the answer to 105 ÷ 5Image: constraint of the answer to 105 ÷ 558 - 39 =Image: constraint of the answer to 105 ÷ 5Image: constraint of the answer to 105 ÷ 5200 ÷ 10Image: constraint of the answer to 105 ÷ 5Image: constraint of the answer to 105 ÷ 56 × 3Image: constraint of the answer to 105 ÷ 5Image: constraint of the answer to 105 ÷ 516 × 3Image: constraint of the answer to 105 ÷ 5Image: constraint of the answer to 105 ÷ 516 × 3Image: constraint of the answer to 105 ÷ 5Image: constraint of the answer to 105 ÷ 517 there are 27 biscuits to be shared between three plates, how many biscuits will be on each plate?Image: constraint of the answer to 105 ÷ 54 lots of 4Image: constraint of the answer to 105 ÷ 5Image: constraint of the answer to 105 ÷ 5Image: constraint of the answer to 105 ÷ 517 the state of 4Image: constraint of the answer to 105 ÷ 5Image: constraint of the answer to 105 ÷ 5Image: constraint of the answer to 105 ÷ 517 the state of 4Image: constraint of the answer to 105 • 5Image: constraint of the answer to 105 • 5Image: constraint of the answer to 105 • 517 the state of 4Image: constraint of the answer to 105 • 12Image: constraint of the answer to 105 • 12Image: constraint of the answer to 105 • 12200 the state of 4Image: constraint of the answer to 105 • 12Image: constraint of the answer to 105 • 12Image: constraint of the answer to 105 • 12219 the state of 5Image: constraint of the answer to 105 • 12Image: constraint of the answer to 105 • 12Image: constraint of the a   | 1501 - 1   | 478       |           |          |            |          |          |           |           |          |      |    |        |
| $20 \div 4$ Image: Constant in the answer to $105 \div 5$ Image: Constant in the answer to $105 \div 5$ $58 - 39 =$ Image: Constant in the answer to $105 \div 5$ Image: Constant in the answer to $105 \div 5$ $200 \div 10$ Image: Constant in the answer to $100 \div 10$ Image: Constant in the answer to $100 \div 10$ $6 \times 3$ Image: Constant in the answer to be shared between three plates, how many biscuits in the answer to be shared between three plates, how many biscuits in the answer to $100 \div 12$ Image: Constant in the answer to $100 \div 12$ $4$ lots of $4$ Image: Constant in the answer to $100 \div 12$ Image: Constant in the answer to $100 \div 12$ $36 \div 9$ Image: Constant in the answer to $100 \div 12$ Image: Constant in the answer to $100 \div 12$ $36 \div 9$ Image: Constant in the answer to $100 \div 12$ Image: Constant in the answer to $100 \div 12$ $24, 72, 16$ and $32$ are multiples of which number?Image: Constant in the answer to $100 \div 12$ $219 - 2318$ Image: Constant in the answer to $100 \div 12$   | The nui  | nber of   | minutes   | s betwee | en 17:51 o | and 18:C | )6.      |           |           |          |      |    |        |
| The number of ones in the answer to 105 ÷ 5Image: Second Seco | XXV - V  | /II       |           |          |            |          |          |           |           |          |      |    |        |
| 58 - 39 =Image: constraint of the second | 20 ÷ 4   |           |           |          |            |          |          |           |           |          |      |    |        |
| 200 ÷ 10Image: constraint of the second  | The nu   | nber of   | ones in   | the ans  | wer to 1   | 05 ÷ 5   |          |           |           |          |      |    |        |
| 6 × 3Image: Second  | 58 - 39  | =         |           |          |            |          |          |           |           |          |      |    |        |
| If there are 27 biscuits to be shared between three plates, how many biscuits<br>will be on each plate?Image: constraint of the shared between three plates, how many biscuits4 lots of 4Image: constraint of the money on a bag. How much money<br>does she have left?Image: constraint of the money on a bag. How much money<br>does she have left?71 - 53Image: constraint of the money on a bag. How much money<br>does she have left?Image: constraint of the money on a bag. How much money<br>does she have left?71 - 53Image: constraint of the money on a bag. How much money<br>does she have left?Image: constraint of the money on a bag. How much money<br>does she have left?71 - 53Image: constraint of the money on a bag. How much money<br>does she have left?Image: constraint of the money on a bag. How much money<br>does she have left?71 - 53Image: constraint of the money on a bag. How much money<br>does she have left?Image: constraint of the money on a bag. How much money<br>does she have left?71 - 53Image: constraint of the money on a bag. How much money<br>does she have left?Image: constraint of the money<br>does she have left?71 - 53Image: constraint of the money on a bag. How much money<br>does she have left?Image: constraint of the money<br>does she have left?36 ÷ 9Image: constraint of the money on a bag. How much money<br>24, 72, 16 and 32 are multiples of which number?Image: constraint of the money<br>does she have left?2319 - 2318Image: constraint of the money on t   | 200 ÷ 1  | 0         |           |          |            |          |          |           |           |          |      |    |        |
| will be on each plate?Image: Constraint of the second  |  |           |           |          |            |          |          |           |           |          |      |    |        |
| Lydia has £50. She spends half of the money on a bag. How much money<br>does she have left?Image: Comparison of the money on a bag. How much money<br>does she have left?71 - 5360 ÷ 1260 ÷ 126036 ÷ 96024, 72, 16 and 32 are multiples of which number?602319 - 231860   |  |           |           | to be sh | ared be    | tween tl | rree pla | tes, how  | ' many l  | oiscuits |      |    |        |
| does she have left?  Image: Comparison of the system of                     | 4 lots o   | f 4       |           |          |            |          |          |           |           |          |      |    |        |
| 60 ÷ 12  Image: Constraint of the second                      |  |           |           |          |            |          |          |           |           |          |      |    |        |
| 36 ÷ 9  24, 72, 16 and 32 are multiples of which number?    2319 - 2318   | 71 - 53  |           |           |          |            |          |          |           |           |          |      |    |        |
| 24, 72, 16 and 32 are multiples of which number?  | 60 ÷ 12  |           |           |          |            |          |          |           |           |          |      |    |        |
| 2319 - 2318   | 36 ÷ 9   |           |           |          |            |          |          |           |           |          |      |    |        |
|   | 24, 72, 16 and 32 are multiples of which number? |           |           |          |            |          |          |           |           |          |      |    |        |
| 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2   | 2319 - 2   | 2318      |           |          |            |          |          |           |           |          |      |    |        |
|   | 2 + 2 +  | 2 + 2 +   | 2 + 2 +   | 2 + 2 +  | 2 + 2      |          |          |           |           |          |      |    |        |

Answer to Clue 2:\_\_\_\_\_



#### **Clue 3: Converting Elves**

Here are some measurements. The mischievous elves have the conversions of these measurements. The measurements and letters left over will spell out the answer.





Answer to Clue 3:\_





#### **Clue 4: Roman Elves**

Work out the Roman numerals and find the answers in the table. Order the words to make a sentence to solve the clue.



| 100     | 26            | 7          | 21     |
|---------|---------------|------------|--------|
| packing | munching      | research   | elf    |
| 30      | 16            | 9          | 29     |
| cake    | manufacturing | wrapping   | worked |
| 17      | 50            | 8          | 6      |
| in      | the           | department | the    |

Answer to Clue 4:\_\_\_\_\_





### Clue 5: A Maze of Food

Using only addition or subtraction of either 10 or 100, find a path from the start number to the answer. For example, if you start on 130, you can either get to 140 or 120 (plus or minus 10) or 30 or 230 (plus or minus 100).

| Start<br>45 | 55  | 75                  | 105 | 151    | 303 | 110               | 25  |
|-------------|-----|---------------------|-----|--------|-----|-------------------|-----|
| 44          | 155 | 85                  | 203 | 140    | 293 | 280               | 270 |
| 100         | 145 | 245                 | 235 | 253    | 273 | 263               | 253 |
| 101         | 130 | 122                 | 135 | 103    | 113 | 123               | 113 |
| 200         | 103 | 133                 | 125 | 225    | 325 | 305               | 295 |
| 220         | 193 | 123                 | 105 | 220    | 315 | 445               | 425 |
| 105         | 89  | 95                  | 290 | 115    | 415 | 405               | 302 |
| sprouts     | 79  | pigs in<br>blankets | 300 | turkey | 410 | 395 mince<br>pies | 314 |

Answer to Clue 5:\_\_\_\_\_

Have you solved the mystery of who ate Mrs Claus' Christmas cake?





# Answers

Clue 1: Elf Numbers

| 4 × <b>5</b> = 20  | 18 ÷ 2 = <b>9</b>  | <b>4</b> × 8 = 32  |
|--------------------|--------------------|--------------------|
| <b>10</b> ÷ 2 = 5  | 5 × 12 = <b>60</b> | 7 × 6 = <b>42</b>  |
| <b>90</b> ÷ 10 = 9 | 8 × <b>8</b> = 64  | <b>11</b> × 4 = 44 |

**96** ÷ 12 = 8

| <b>9</b>  | <b>8</b>  | 20        | <b>42</b> |
|-----------|-----------|-----------|-----------|
| from      | the       | curly     | found     |
| <b>11</b> | 36        | <b>96</b> | 80        |
| larder    | glittery  | bell      | dropped   |
| 12        | <b>10</b> | <b>5</b>  | <b>4</b>  |
| near      | α         | shoe      | a         |
| <b>60</b> | 48        | <b>90</b> | 2         |
| was       | pointed   | in        | not       |

Answer to Clue 1: A bell from a shoe was found in the larder.





|  | Answer | Letter |
|--|--------|--------|
| 45 - 25  | 20     | t      |
| 4 × 2  | 8      | h      |
| How many sides does a pentagon have?   | 5      | е      |
| The number of hundreds in 6552.  | 5      | е      |
| If a square flower bed has a perimeter of 48m, what is the length of one side?                       | 12     | l      |
| 1/3 of 18 please format as fraction  | 6      | f      |
| 1501 - 1478  | 23     | w      |
| The number of minutes between 17:51 and 18:06.   | 15     | 0      |
| XXV - VII  | 18     | r      |
| 20 ÷ 4   | 5      | е      |
| The number of ones in the answer to 105 ÷ 5  | 1      | a      |
| 58 - 39 =  | 19     | s      |
| 200 ÷ 10   | 20     | t      |
| 6 × 3  | 18     | r      |
| If there are 27 biscuits to be shared between three plates, how many biscuits will be on each plate? | 9      | i      |
| 4 lots of 4  | 16     | р      |
| Lydia has £50. She spends half of the money on a bag. How much money does she have left?             | 25     | у      |
| 71 - 53  | 18     | r      |
| 60 ÷ 12  | 5      | е      |
| 36 ÷ 9   | 4      | d      |
| 24, 72, 16 and 32 are multiples of which number?   | 8      | h      |
| 2319 - 2318  | 1      | a      |
| 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2  | 20     | t      |

Answer to Clue 2: The elf wore a stripy red hat.





#### Clue 3: Converting Elves

Answer to Clue 3: male

#### Clue 4: Roman Elves

| 100       | <b>26</b>     | 7          | <b>21</b> |
|-----------|---------------|------------|-----------|
| packing   | munching      | research   | elf       |
| <b>30</b> | 16            | <b>9</b>   | <b>29</b> |
| cake      | manufacturing | wrapping   | worked    |
| <b>17</b> | <b>50</b>     | <b>8</b>   | <b>6</b>  |
| in        | the           | department | the       |

Answer to Clue 4: The cake munching elf worked in the wrapping department.

#### Clue 5: A Maze of Food

| Start<br>45 | 55  | 75                  | 105 | 151    | 303 | 110                  | 25  |
|-------------|-----|---------------------|-----|--------|-----|----------------------|-----|
| 44          | 155 | 85                  | 203 | 140    | 293 | 280                  | 270 |
| 100         | 145 | 245                 | 235 | 253    | 273 | 263                  | 253 |
| 101         | 130 | 122                 | 135 | 103    | 113 | 123                  | 113 |
| 200         | 103 | 133                 | 125 | 225    | 325 | 305                  | 295 |
| 220         | 193 | 123                 | 105 | 220    | 315 | 445                  | 425 |
| 105         | 89  | 95                  | 290 | 115    | 415 | 405                  | 302 |
| sprouts     | 79  | pigs in<br>blankets | 300 | turkey | 410 | 395<br>mince<br>pies | 314 |

Answer to Clue 5: The elf's favourite food is mince pies.

Have you solved the mystery of who ate Mrs Claus' Christmas cake?

Frizzle Frizz



