

# The Mystery of the Putrid Pumpkin Poisoner

It was October so Lord and Lady Honeybee were hosting the Annual Pumpkin Masked Ball at Kürbis Castle. Everything was lavish: the food, the decoration and, of course, the costumes!



The music and conversations were flowing. Suddenly, a scream split the air! It was Lady Honeybee, who was looking at her husband lying on the floor in agony. While an off-duty doctor rushed to help, guest after guest fell to the floor - some being violently sick!

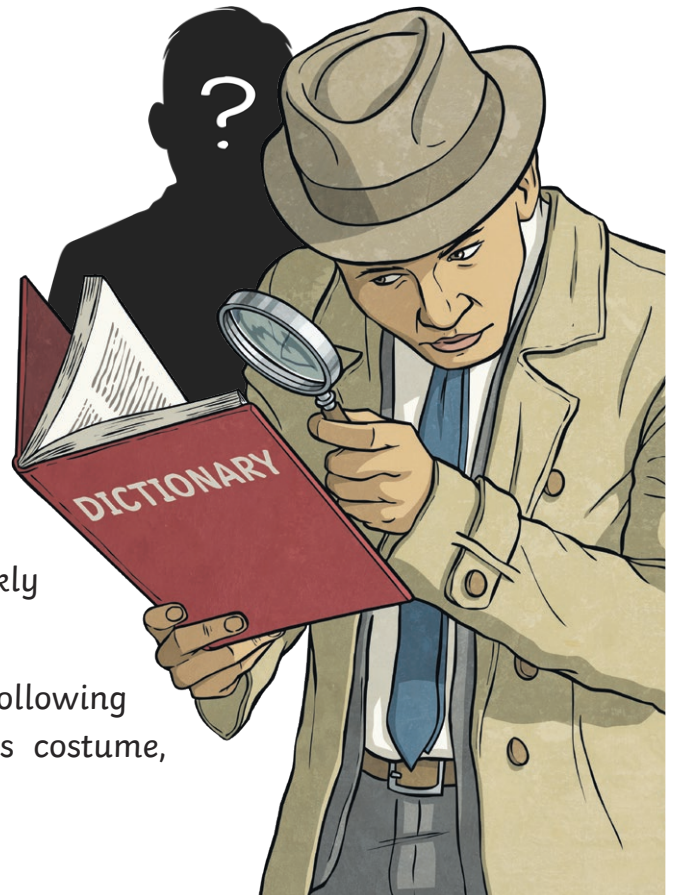
When the paramedics arrived, they realised that they had been poisoned by the pumpkin soup!



It's your job as the Chief Inspector to identify the Putrid Pumpkin Poisoner. The castle is now in lockdown: none of the guests can leave until you have solved the case.

You have the Scene of Crime Officers (SOCOs) to help you as you find the culprit as quickly as possible.

To uncover the Putrid Pumpkin Poisoner, solve the following clues based on the suspect's gender, fancy dress costume, shoes, hair and room wing location.



# The Suspect Guests at Kürbis Castle

Name	Gender	Fancy Dress	Shoes	Hair	Room Wing
Alan Aladdin	M	Wizard	Boots	Wig	West
Amina Amish	F	Superhero	Flat Shoes	Bald	South
Bailey Butternut	F	Bat	Barefoot	Blonde	North
Bob Bobbing	M	Ghost	Slippers	Ginger	North
Casper Candle	M	Skeleton	Flat Shoes	Grey	South
Carrie Curcurbita	F	Witch	High Heels	Wig	West
Deirdre Dino-Squash	F	Black Cat	Boots	Bald	East
Dan Dumplings	M	Superhero	Flat Shoes	Black	North
Edgar Edible	M	Dracula	Flat Shoes	Grey	South
Eilish Enzymes	F	Ghost	Sandals	Blonde	East
Freya Festival	F	Werewolf	Barefoot	Wig	North
Franc Fairytale	M	Wizard	Slippers	Ginger	East
Gordon Gourd	M	Bat	Flat Shoes	Brown	West
Gertrude Ghost	F	Witch	High Heels	Grey	East
Howard Howden	M	Skeleton	Sandals	Brown	West
Halle Hallowe'en	F	Spider	Boots	Bald	North
Ian Iron-Man	M	Ghost	Slippers	Blonde	South
Isla Isqoutum-Squash	F	Black Cat	Barefoot	Black	East
Jane Jack-O-Lantern	F	Superhero	Flat Shoes	Bald	South
Joe Jack-Be-Quick	M	Dracula	Flat Shoes	Brown	West
Katie Kakai	F	Spider	Boots	Black	West
Kamil Kuri	M	Wizard	Sandals	Grey	South
Li Lantern	M	Skeleton	Barefoot	Blonde	East
Lulu Lumina	F	Witch	High Heels	Wig	North
Missy Mischief	F	Bat	Sandals	Black	East
Morgan Mangelwurz	M	Ghost	Sandals	Bald	South
Nelly Native-American-Fruit	F	Witch	Boots	Blonde	North
Nye New-England-Pie	M	Dracula	Flat Shoes	Black	West
Osman O'Lantern	M	Superhero	Boots	Ginger	East
Orla Orange	F	Skeleton	Slippers	Bald	South
Percy Patch	M	Wizard	Barefoot	Wig	North
Patty Pan-Pie	F	Superhero	High Heels	Grey	West

# Clue 1

The SOCOs found the empty bottle that the ghastly guest used to hold the poison. Fortunately for them, they were able to get some good DNA samples.

Look at the list of dates below.

You need to calculate how many nights there are from the first date to the second date.

The number of nights will give you a letter of the alphabet that will spell out the answer to the clue using the code

A=26, B=25, C=24....Z=1.

From	To	Letter
20th September	8th October	
Christmas Day	New Year's Day	
29th June	17th July	
16th February	24th February	
6th March	April Fools' Day	
16th November	7th December	
20th August	11th September	
19th October	2nd November	
9th May	4th June	
The penultimate day of January	Valentine's Day	
Bonfire Night	27th November	

A	B	C	D	E	F	G	H	I	J	K	L	M
26	25	24	23	22	21	20	19	18	17	16	15	14

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
13	12	11	10	9	8	7	6	5	4	3	2	1

## Clue 2

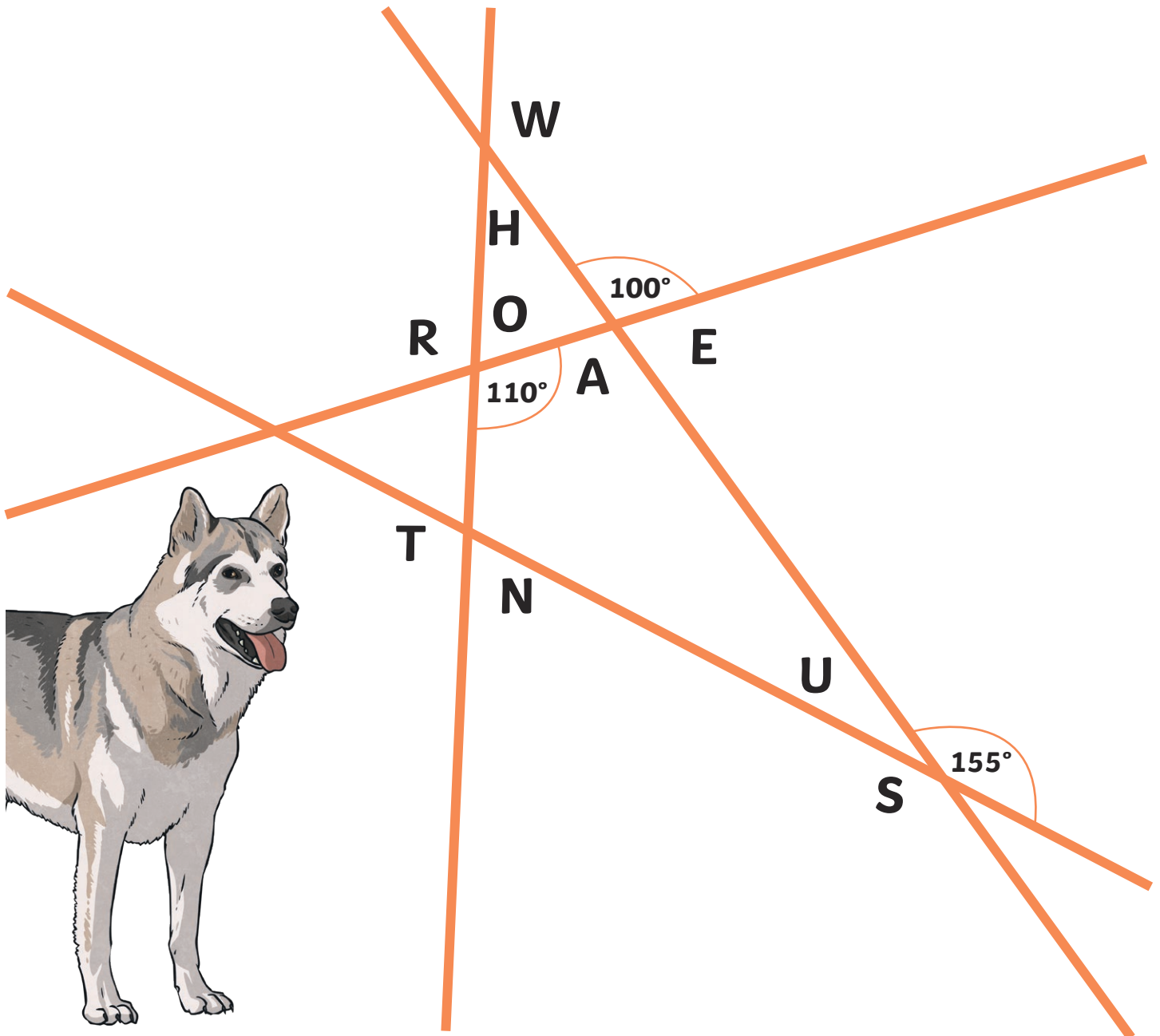
You found evidence of footprints near the area of the pumpkin soup which the SOCOs investigated further. The detectives were able to eliminate certain types of footwear.

Follow the maths trail below to leave you with a number that corresponds to a letter of the alphabet (1=A and 2=B and 3=C, etc.). This will tell you the initial letter of the footwear that the culprit **was** wearing.

Start	2017 ÷ 100		→	+ 0.83	→	÷ 3	↘
↖	+ 0.4	→	Now find 40% of your number			↘	Square it
Find 20%	↖	x 100	→	÷ 5	↘	Find $\frac{1}{4}$	↓
↑	Halve it again	↖	√ Square Root	↘	Double it		x 10
x 10	↑	- 4.5	What's the Answer?			Double it	↓
↑	Halve it again	↖	Quarter it		↖		Cube it
- 0.7	↖	Halve it		←	- 1.2	↖	
↖	Multiply by 0.5			←	Find $\frac{3}{5}$ of your number		

## Clue 3

The SOCOs used sniffer dogs to follow the culprit's movements. From the trails below, use your understanding of angles on a straight line, around a point, and in opposition to work out the angles for each of the letters. The angles are not drawn to scale so do not try to measure them with a protractor! Use the angles you find to reveal the wing where the wrongdoer was staying.



<b>55°</b>	<b>70°</b>	<b>110°</b>	<b>125°</b>	<b>30°</b>



## Clue 4

The SOCOs have found the empty bottle of putrid potion that was used to poison the soup. Although it is empty, there is a hair attached to the screw top.

To find the hair colour, you need to solve the following calculations.

Each calculation's answer reveals a letter using the code 1=A, 2=B, 3=C, etc.

Write the letter in the square below the calculation. When all the calculations have been completed, only one set of answers will reveal a word that is spelt correctly.

That's your answer!

$0.17 + 0.36$ $+ 1.47$	$0.6 \times 20$	$3 \times 7$	$9.8 + 4.2$	$\frac{2}{5}$ of 10

$\frac{1}{5}$ of 10	$0.01 \times 100$	$\sqrt{16}$	$0.3 \times 40$

$4 \times 0.5$	$\frac{2}{3}$ of 18	$0.15 \times 100$	$0.7 \times 20$	$0.12 + 3.88$	$500 \div 100$

1% of 200	$\sqrt{144}$	10% of 10	$5.5 \times 2$	Double 1.5



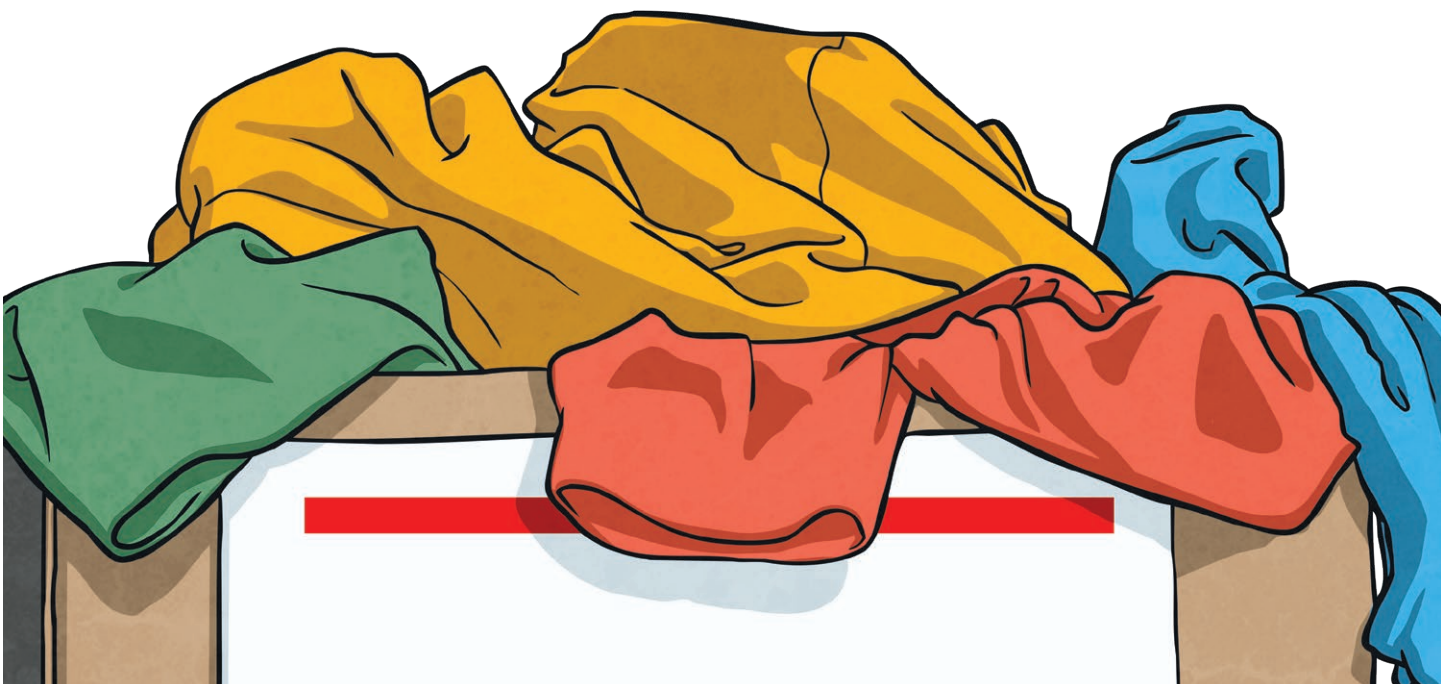
## Clue 5

The SOCOs and their sniffer dogs have uncovered the final clue to solve the mystery.

The scent trail ends in the castle gardens where there is a pile of discarded clothes. On closer inspection, they seem to be the shady suspect's fancy dress costume.

Shade only prime numbers and factors of 48 to reveal the costume they found.

20	27	33	46	62	50	42	65	10	51	26
17	48	53	15	54	6	72	35	67	16	79
5	75	73	45	11	0	31	56	22	4	64
71	41	9	36	47	61	1	32	69	29	40
2	28	13	70	24	66	19	63	46	7	52
23	37	3	55	59	21	8	14	74	12	38
60	39	18	49	34	44	57	68	25	30	58



# The Confession

When the culprit was finally caught, this was their confession.

x	12	9	7	3	20	6	8	4	30	5
10	O	M	©	R	Q	V	N	A	L	)
5	V	F	:	C	#	R	A	(	@	=
4	B	E	G	-	N	H	D	W	O	+
7	"	!	Z	I	\	S	.	G	\$	:
9	U	[	!	:(	T	:)	Y	E	<	F
100	K	/	£	L	&	J	%	>	P	'
3	E	:(	I	~	V	,	H	-	M	C
8	]	Y	.	H	*	B	X	D	?	A
12	'	U	"	E	?	Y	"	B	;	V
6	Y	:)	S	,	O	E	B	H	T	R

21	180	16	40	42	180	120	120

500	42	200	108	40	42	24	36	32	144

16	21	180	24	40	300	300	180	24	120	42	36

3000	36	120	3000	300	36	180	24	36	30	36	63



# The Mystery of the Putrid Pumpkin Poisoner **Answers**

Clue 1: **It is a female**

**Letter**

**I = 18**

**T = 7**

**I = 18**

**S = 8**

**A = 26**

**F = 21**

**E = 22**

**M = 14**

**A = 26**

**L = 15**

**E = 22**

Clue 2: **2**

(See last page for step by step answers)

**Therefore 2=B**

**The culprit has either boots**

**or is barefoot**

Clue 3: **Reveals: NORTH**

**(E=80°, A=100°, S=55°, U=25°, T=125°, N=55°, O=70°, H=30°, W=150°, R=110°)**

Children may need reminding:

- Opposite angles are equal
- A straight line = 180°
- Internal angles of a triangle = 180°
- Internal angles of a quadrilateral = 360°

Clue 4: **Correct Spelling Reveals: BLONDE**

**1: BLUND**

**2: BADL**

**3: BLONDE**

**4: BLAKC**

Clue 5: **Fancy Dress is a bat.**

20	27	33	46	62	50	42	65	10	51	26
17	48	53	15	54	6	72	35	67	16	79
5	75	73	45	11	0	31	56	22	4	64
71	41	9	36	47	61	1	32	69	29	40
2	28	13	70	24	66	19	63	46	7	52
23	37	3	55	59	21	8	14	74	12	38
60	39	18	49	34	44	57	68	25	30	58

The Culprit:

**Bailey Butternut**

The Confession:

**"It was too 'squashed' with all those people in there!"**

(Children may need telling/reminding that a pumpkin is a type of squash.)

# Clue 2 Answers

Start	2017 ÷ 100 20.17		→	+ 0.83 21	→	÷ 3 7	↘		
↗	+ 0.4 20	→	Now find 40% of your number 8			↘	Square it 49		
Find 20% 19.6	↗	x 100 85	→	÷ 5 17	↘	Find <table><tr><td>1</td></tr><tr><td>4</td></tr></table> 2	1	4	↓
1									
4									
↑	Halve it again 0.85	↗	√ Square Root 2	↘	Double it 34	x 10 490			
x 10 98	↑	- 4.5 4	What's the Answer? 2			↓	↓		
↑	Halve it again 1.7	↖	Quarter it 8.5		↖	Cube it 8	÷ 14 35		
- 0.7 9.8	↖	Halve it 3.4		←	- 1.2 6.8	↖	↖		
↖	Multiply by 0.5 10.5			←	Find <table><tr><td>3</td></tr><tr><td>5</td></tr></table> of your number 21			3	5
3									
5									