Mystery at the Springfall Town Carnival Maths Game

The people of Springfall have been eagerly anticipating the day of the carnival. They have been building and decorating floats and getting costumes organised, ready for the parade.

The games, stalls and rides have all been set up in the field, and the crowds are gathering. It will be another fabulous carnival in Springfall.

But wait! Disaster has struck! Someone has stolen the throne from the float that the carnival queen was meant to be sitting on! It was a real thing of beauty; gold painted, with a back six feet tall and (almost real) rubies encrusted in the arms. And the carnival queen is inconsolable! But who would do such a terrible thing?

Your job is to use the clues and descriptions of the suspects to solve the mystery of the Throne Robber of Springfall Carnival! Good luck.
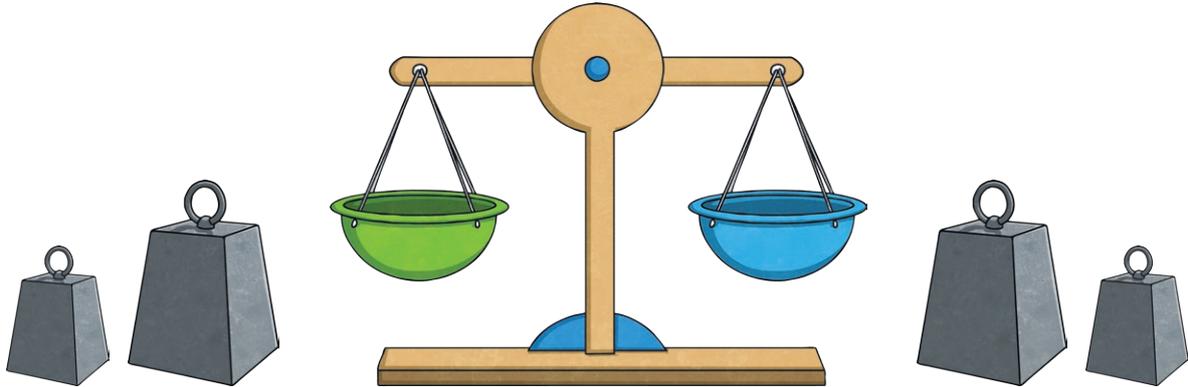
visit twinkl.com

Descriptions of Suspects

Name	M/F	Age	Wore sunglasses	Favourite activity	Type of hat
Amy Anders	F	20	yes	helter-skelter	straw
Amir Abdul	M	17	yes	spinning teacups	none
Bartek Bazyli	M	32	no	bouncy castle	baseball cap
Belinda Browne	F	18	no	helter-skelter	none
Carol Carousel	F	23	yes	spinning teacups	straw
Cassius Cray	M	72	yes	mini golf	Panama
Dina Dancer	F	28	yes	helter-skelter	baseball cap
Dawid Dobray	M	13	yes	spinning teacups	Baseball cap
Elif Evergreen	F	34	no	mini golf	visor
Emily Emeline	F	48	yes	bouncy castle	straw
Fiona Frenzy	F	42	no	bouncy castle	none
Filip Felay	M	31	yes	bouncy castle	baseball cap
Gurleen Gad	M	62	yes	mini golf	Panama
Graeme Grindley	M	27	yes	bouncy castle	baseball cap
Hanna Heels	F	59	yes	mini golf	visor
Horace Hows	M	59	yes	bouncy castle	baseball cap
Isaac Ingles	M	26	yes	bouncy castle	visor
Ishmael Ince	M	33	no	bouncy castle	baseball cap
Jia June	F	19	yes	helter-skelter	baseball cap
Jack James	M	44	yes	bouncy castle	baseball cap
Klint Klivers	M	42	yes	mini golf	Panama
Karl Klam	M	70	yes	mini golf	Panama
Liza Laughs	F	15	no	spinning teacups	straw
Lily Lamb	F	47	yes	mini golf	visor
Macey Moore	F	30	no	helter-skelter	straw
Mohammad Magesh	M	41	yes	bouncy castle	visor
Nikita Noakes	F	18	yes	spinning teacups	straw
Narinder Nagar	M	42	yes	bouncy castle	visor
Oskar Okula	M	20	yes	spinning teacups	straw
Olivia Ochre	F	29	no	spinning teacups	baseball cap

Clue 1 Greater Than or Less Than?

Compare the measurements.

Use these signs < > = in the empty boxes.

1. 1m [ ] 100cm

2. 3m 67cm [ ] 294cm

3. 65 seconds [ ] 1 minute

4. 65mm [ ] 6cm

5. 500ml [ ] 1l

6. 3ml [ ] 3l

7. 1kg 400g [ ] 1500g

8. 1 year [ ] 367 days

9. 250kg [ ] 2500g

10. 3522ml [ ] 3l 530ml

If there are more > the throne thief **did not** wear sunglasses.

If there are more < the throne thief **did** wear sunglasses.

Clue 2 A Mixed Bag

A	B	C	D	E	F	G	H	I	J	K	L	M
7	10	8	22	4	26	1	18	3	11	5	6	32

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
2	90	100	50	19	28	30	13	88	41	0	21	8

Solve these problems to work out the letters which spell out whether the thief was male or female.

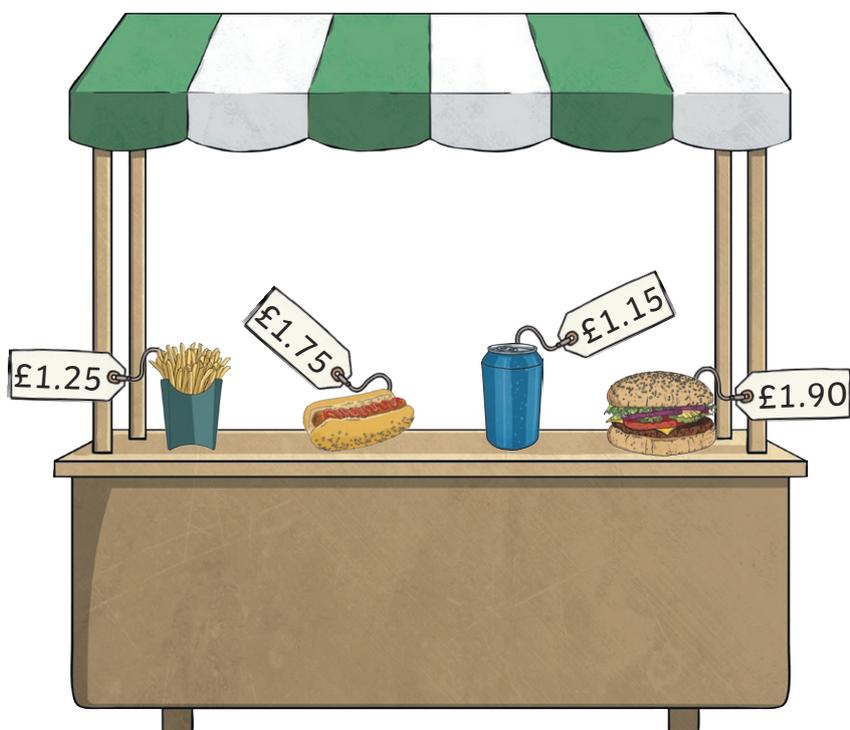|	Answer	Letter
The number of vertices on a triangular based pyramid.		
Multiply the number of legs an octopus has, with the number of legs a zebra has.		
56 ÷ ☐ = 8		
900 ÷ 10		
The number of months in a year, take away half the number of months in a year.		
The number of 20p coins in £6.		
Multiply two and twelve, then divide the answer by six.		
The number of tens in 4222		
Work out these Roman numerals: XXVI		

Answer to clue 2:

__ __ __ / __ __ __ __ __ __

Clue 3 All Change!

Sarah buys a hotdog, some chips and a drink.

She pays with a £10 note.

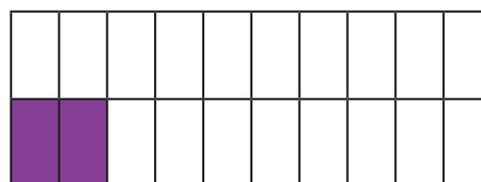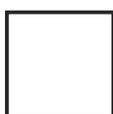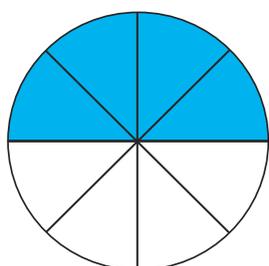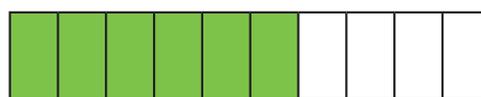How many of the purses show the correct change she will be given?

£1.25   £1.75   £1.15   £1.90
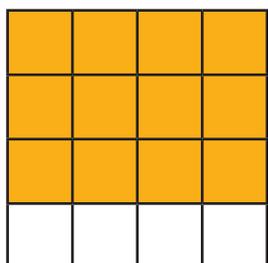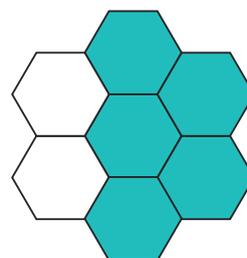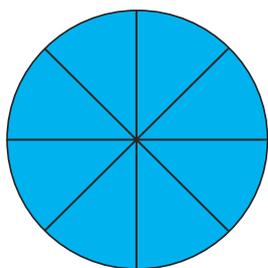
Clue 3 All Change!

	Favourite activity of the throne thief
There is one purse with the correct change.	helter-skelter
There are two purses with the correct change.	bouncy castle
There are three purses with the correct change.	mini golf
There are four purses with the correct change.	spinning teacups

The throne thief's favourite activity is:

_____

Clue 4 Shady Fractions

straw $\dfrac{2}{7}$	the $\dfrac{8}{8}$	visor $\dfrac{4}{12}$	wore $\dfrac{2}{20}$
thief $\dfrac{12}{16}$	panama $\dfrac{18}{20}$	no $\dfrac{6}{12}$	hat $\dfrac{1}{8}$
baseball cap $\dfrac{6}{10}$	a $\dfrac{5}{7}$	throne $\dfrac{4}{8}$	didn't $\dfrac{2}{18}$

Answer to clue 4

Clue 5 The Most Frequent

Complete these column calculations.

Look at the tens column of each of your answers. The digit which appears in the tens column the most frequently will tell you the tens digit of the thief's age.

1.
```
    784
  - 439
  _____

  _____
```

2.
```
    926
  + 145
  _____

  _____
```

3.
```
   2473
  - 1211
  _____

  _____
```

4.
```
   3092
  - 1461
  _____

  _____
```

5.
```
    721
  -  80
  _____

  _____
```

6.
```
   1340
  +  731
  _____

  _____
```

7.
```
    903
  + 153
  _____

  _____
```

8.
```
    832
  - 691
  _____

  _____
```

The number which appeared in the tens column most frequently is _____.

The decade of the age of the carnival queen throne thief is _____.

The throne thief is _____.

Clue 1 Greater Than or Less Than? **Answers**

1. 1m   =   100cm

2. 3m 67cm   >   294cm

3. 65 seconds   >   1 minute

4. 65mm   >   6cm

5. 500ml   <   1l

6. 3ml   <   3l

7. 1kg 400g   <   1500g

8. 1 year   <   367 days

9. 250kg   >   2500g

10. 3522ml   <   3l 530ml

There are more < signs there so the throne thief did wear sunglasses.

Clue 2 A Mixed Bag **Answers**

	Answer	**Letter**
The number of vertices on a triangular based pyramid.	4	E
Multiply the number of legs an octopus has, with the number of legs a zebra has.	32	M
56 ÷ ☐ = 8	7	A
900 ÷ 10	90	O
The number of months in a year, take away half the number of months in a year.	6	L
The number of 20p coins in £6.	30	T
Multiply two and twelve, then divide the answer by six.	4	E
The number of tens in 4222	2	N
Work out these Roman numerals: XXVI	26	F

NOT FEMALE

Clue 3 All Change! **Answers**

There are two purses with the correct change of £5.85 in them.

The throne thief's favourite activity is the bouncy castle.

Clue 4 Shady Fractions **Answers**

straw $\dfrac{2}{7}$	**the** $\dfrac{8}{8}$	visor $\dfrac{4}{12}$	**wore** $\dfrac{2}{20}$
thief $\dfrac{12}{16}$	panama $\dfrac{18}{20}$	no $\dfrac{6}{12}$	hat $\dfrac{1}{8}$
baseball cap $\dfrac{6}{10}$	**a** $\dfrac{5}{7}$	**throne** $\dfrac{4}{8}$	didn't $\dfrac{2}{18}$

THE THRONE THIEF WORE A BASEBALL CAP

Clue 5 The Most Frequent **Answers**

1. 784 − 439 = 3**4**5
2. 926 + 145 = 1071
3. 2473 − 1211 = 1262
4. 3092 − 1461 = 1631
5. 721 − 80 = 6**4**1
6. 1340 + 731 = 2071
7. 903 + 153 = 1056
8. 832 − 691 = 1**4**1

The number which appears in the tens column most frequently is 4.

The decade of the age of the carnival queen throne thief is forty.

The throne thief is Jack James.