The Mystery of Missing Medals

It is the eve of the HuffandPuffington Primary School Sports Day. The preparations were going well until Mr Bolt found that all the medals had been stolen!

Mr Bolt assumes that they went missing overnight as Mrs Farah said that she definitely put them in the sports hall store the previous afternoon.

CCTV covers parts of the school but not the sports hall store. You are the detective in charge of the case and, with your trusty Scene of Crime Officers (SOCOs), you need to find the perpetrator before the whistle blows to start sports day tomorrow morning!

Solve the clues to eliminate all-but-one of the following suspects based on their gender, the school house colour they are in, their handed-ness, shoe size and their personal best time for the 100m.

Good Luck … HuffandPuffington Primary School Sports Day is depending on you!

Name	M/F	House Colour	Handed	Shoe Size	100m Sprint PB
Alvin Athlete	M	Red	Left	4	13.56 secs
Ann Aerobic	F	Green	Right	5	15.82 secs
Billy S. Blocks	M	Blue	Right	7	13.99 secs
Bronwyn Baton	F	Yellow	Ambidextrous	3	14.20 secs
Chay Circuit	M	Red	Right	6	17.22 secs
Chen Crowd	F	Green	Right	5	13.67 secs
Dion Discus	M	Yellow	Right	5	14.33 secs
Diana Decathlon	F	Blue	Right	8	15.83 secs
Eddy Eggnspoon	M	Yellow	Right	6	16.21 secs
Edith Exercise	F	Blue	Left	7	14.97 secs
Ffion Firstplace	F	Yellow	Right	5	13.72 secs
Freddie Finisher	M	Green	Ambidextrous	4	17.30 secs
Gareth Gold	M	Red	Right	4	15.66 secs
Georgie Goals	F	Blue	Right	3	14.51 secs
Heidi Highjump	F	Red	Right	7	13.22 secs
Hassan Hurdle	M	Green	Right	6	14.01 secs
Ivan Inspire	M	Blue	Left	5	15.63 secs
Isiobel Infield	F	Red	Right	5	14.49 secs
Jake Javelin	M	Yellow	Ambidextrous	4	14.75 secs
Jay Jump	F	Green	Right	6	16.21 secs
Katie Kickball	F	Red	Left	4	15.03 secs
Kaspar Kitbag	M	Blue	Right	5	13.99 secs
Lena Longjump	F	Yellow	Right	3	14.33 secs
Luther Leg	M	Blue	Right	6	15.12 secs
Mohammed Medal	M	Green	Ambidextrous	5	13.89 secs
Maria Marathon	F	Red	Right	8	17.50 secs
Naimh Net	F	Yellow	Left	5	16.01 secs
Noah Nutrition	M	Green	Left	3	15.88 secs
Orla Overarm	F	Green	Right	7	14.44 secs
Osgur Olympic	M	Blue	Right	6	16.52 secs
Pamela Putt	F	Yellow	Ambidextrous	5	14.41 secs
Pablo Pentathlon	M	Red	Left	4	15.31 secs

Clue 1

The SOCOs have found a snagged piece of t-shirt on the door catch of the store. The culprit seems to have cut themselves at the same time, enabling the SOCOs to analyse the blood sample and find out something key about the criminal.

Work out the answers to each of these questions and the number given will be a letter of the alphabet using

A = 1, B = 2, C= 3 etc.

1. Sides on a triangle × faces on a pentahedron =

2. Vertices on an octahedron =

3. Faces on a cuboid =

4. Sides on a parallelogram + curved surfaces on a sphere =

5. Faces on a hexagonal-based pyramid × flat and curved surfaces on a cone =

6. Vertices on an octagonal prism ÷ right angles in a rectangle =

7. Faces on a triangular prism =

8. Edges on a hexagonal prism =

9. Degrees in a right angle ÷ sides on a decagon =

10. Faces on a icosahedron – edges on a cone =

11. Faces on a hexagonal prism ÷ edges on a square-based pyramid =

12. Vertices on a heptagon + vertices on a sphere =

13. Edges on a triangular prism =

14. Vertices on a triangular prism × faces on a cylinder =

15. Faces on a dodecahedron =

Clue 2

Although the CCTV camera do not cover the sports store, they do cover some areas around the store and the cameras did catch someone around at 1am this morning...

From the CCTV footage, you can see that the culprit moved very quickly from one CCTV area to another. That has helped you deduce that they must be able to run quite fast.
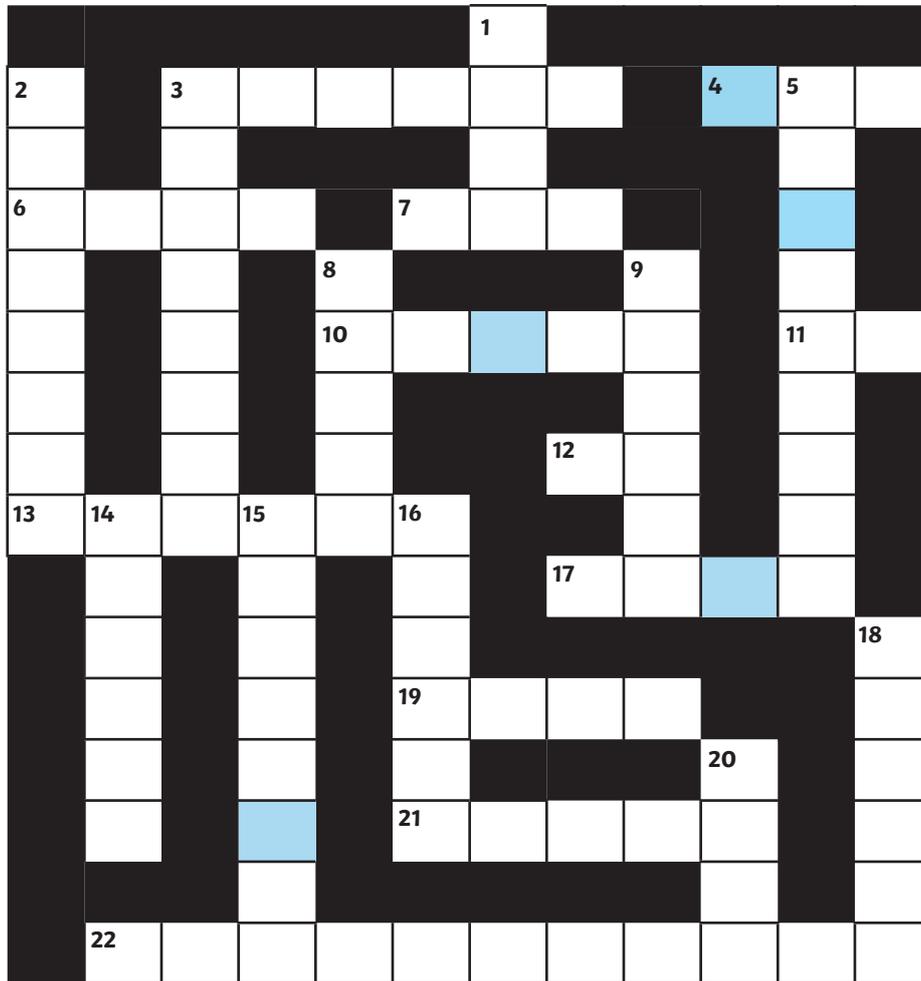
Solve the calculations below and the most popular answer will give you the slowest time that the culprit must be able to run 100m.

1.	M	C	D	X	X	V	I	I	I	÷	C	I	I
2.	D	C	C	C	X	I	I	÷	L	V	I		
3.	M	X	X	V	I	÷	L	X	X	V	I		
4.	M	C	D	X	X	I	÷	X	C	V	I	I	I

Clue 3

The SOCOs have found one medal dropped by the culprit. The fingerprints on it match fingers prints on the store cupboard of a certain house. Solve the crossword below to reveal the answer.
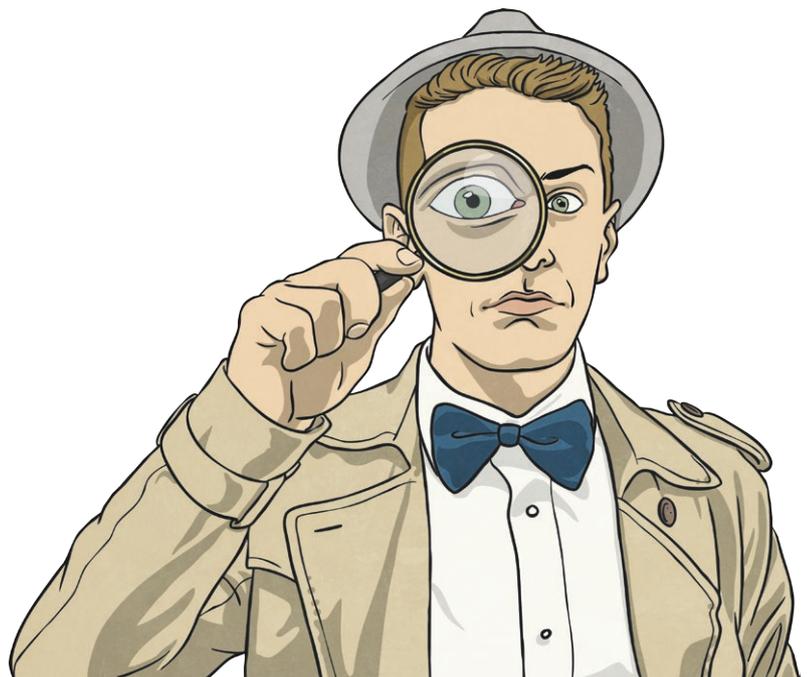
Across	Down
3. The proper name for a corner.	1. A type of diagram using circles and sets.
4. The square root of 36.	2. What you do to a fraction to make the bottom number as low as possible.
6. This sign > means _ _ _ _ than.	3. A line that runs from top to bottom rather than horizontal.
7. The first integer which is not a prime number.	5. A triangle with two sides the same length.
10. An angle less than 90°.	8. Comparing two or more things using this sign:
11. The unit symbol for centimetres.	9. An angle greater than 180˚.
12. The unit symbol for millilitres.	14. Half of a quarter.
13. Part one of the answer to the clue. Part two is an anagram of the letters in the blue squares.	15. The meaning of this sign <.
17. The x and y _ _ _ _ form the basis of a graph.	16. What is measured in kg or ounces?
19. A small metric measure of 16 down.	18. A number that can be multiplied with another to make a larger number.
21. The sum of everything.	20. When you put a point on a graph.
22. The bottom number of a fraction.	

Clue 4

The SOCOs have found that when the perpetrator ran away with the medals, they ran through the newly raked long jump sand pit and left a clear footprint.

The SOCOs were able to ascertain the size of the culprit's shoe which will be revealed on solving the following percentage questions and then finding the mode of the answers.

a) 1% of 600	b) 200% of 4
c) 20% of 25	d) 30% of 20
e) 25% of 20	f) 10% of 50
g) 40% of 10	h) 32% of 25

Clue 5

While you were looking at the shadowy figure on the CCTV, it was impossible to see any clear features of the person, but they did overarm throw the two boxes that the medals were in.

Multiply these decimals to find a message using the code A=1, B=2, C=3 (and so on) to see what you have found out about the culprit.

Remember when working with decimals, it's useful to imagine money.

Decimal Calculations	Answer	Letter
0.2 × 100		
0.2 × 40		
0.9 × 20		
0.25 × 20		
5.75 × 4		
1.15 × 20		
2.25 × 4		
0.8 × 25		
0.5 × 16		
0.25 × 8		
0.75 × 20		
2.5 × 8		
0.25 × 32		
0.08 × 100		
0.04 × 25		
0.5 × 28		
0.02 × 200		
0.95 × 20		

The Confession

When the culprit was finally caught, they had this to say...

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

12	8	30	15	6	21	15	27

54	45	64	36	30	42	42	12	16	35	54

8	9	64	20	64	12	15	9	56	21	42	36

16	56	27	9	30	18	64	60	64	64	16	63

The Mystery of Missing Medals - **Answers**

Clue 1

Offender is a girl.

(15,6,6,5,14,4,5,18,9,19,1,7,9,18,12)

Clue 2

1. 14

2. 14.5

3. 13.5

4. 14.5

Clue 3

Reveals **yellow house**

						¹v					
²s		³v	e	r	t	e	x		⁴s	⁵i	x
i		e				n				s	
⁶m	o	r	e	⁷o	n	e				o	
p		t	⁸r					⁹r		s	
l		i	¹⁰a	c	u	t	e			¹¹c	m
i		c	t					f		e	
f		a	i			¹²m	l			l	
¹³y	¹⁴e	l	¹⁵l	o	¹⁶w			e		e	
	i		e		e	¹⁷a	x	e	s	s	
	g		s		i					¹⁸f	
	h		s	¹⁹g	r	a	m			a	
	t		t		h			²⁰p		c	
	h		h	²¹t	o	t	a	l		t	
			a					o		o	
	²²d	e	n	o	m	i	n	a	t	o	r

Clue 4

The mode answer is **5.**

a) **6**   b) **8**   c) **5**   d) **6**   e) **5**   f) **5**   g) **4**   h) **8**

The Mystery of Missing Medals - **Answers**

Clue 5

Threw with both hands

(20,8,18,5,23,23,9,20,8,2,15,20,8,8,1,14,4,19)

The Culprit:

Pamela Putt

The Confession:

I was just 'medalling' where I should not have been!