L I - Solve problems with or without a calculator: SC – work out the key words / work out operation / work out numerical calculation / work out answer / check that the answer makes sense and answers the question.

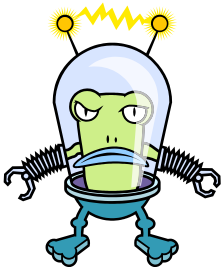
Name:

Mini Murder Mystery
In Space 4

Who

These 6 characters have each calculated how much they have spent on food this month. They have given you some clues. The character who spent the nearest to £70 murdered the character who spent the nearest to £80. Identify the murderer and victim.

Alien 1

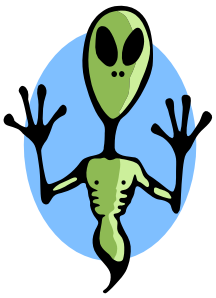


I spent an average of £7 per meal and I bought meals for my wife, 4 nieces and 4 nephews.

Alien 2

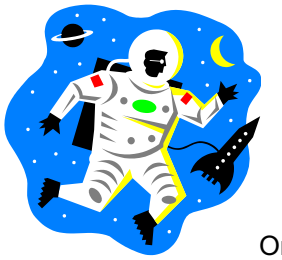
I bought 4 meals. The cheapest was £15 then they increased by £3 each up to the most expensive.

Alien 3



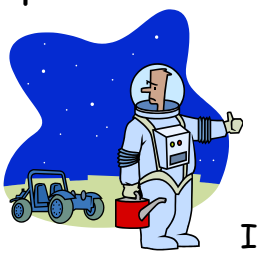
My average spend was £2 less than Alien 1 but I bought 12 meals,

Space Cadet 1



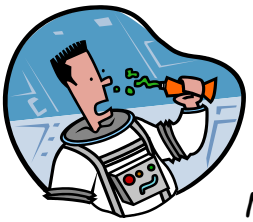
One of my meals cost the same as the Alien 2's most expensive one. My other 4 meals cost an average of £8

Space cadet 2



I bought meals for the 8 other space cadets. The restaurant was offering "Buy 3 get 1 free". The usual price per meal was £12

Space cadet 3



My most expensive meal cost the same as the Alien 2's cheapest meal. The other 6 got progressively cheaper by £1 each.

When

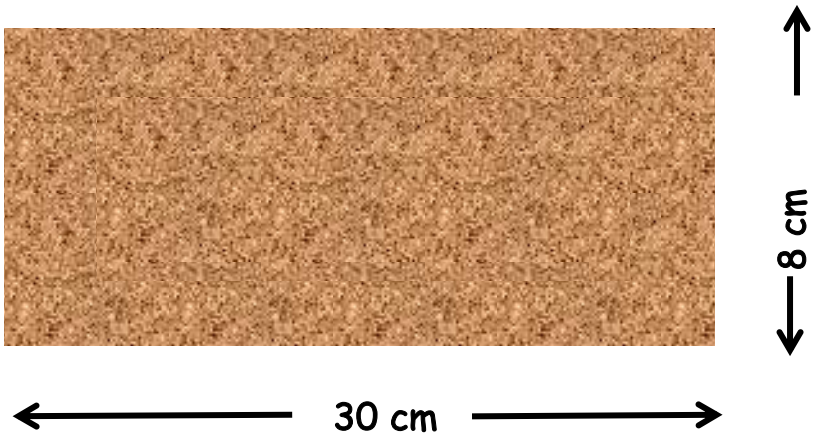
Here is a calendar for October. Identify the date of the murder from these clues.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

- It happened on an **even** number date
- It wasn't at a weekend
- It happened on a date which is a multiple of 8
- The **product** of the digits in the date is 6
- It happened before Halloween

Where

This is a landing site. Calculate its **area** (A) and its **perimeter** (P). The place of the murder is the one with both answers correct. (It is not drawn accurately)



On Mars if A = 240cm^2 and P = 76cm	On Jupiter if A = 240cm^2 and P = 74cm
On Mercury if A = 240cm^2 and P = 86cm	On Saturn if A = 140cm^2 and P = 72cm

Why

Calculate these, Use the letters to decode the message below

A	C	D	E	I
2/3 of 45	89 - 15	(9 x 8) + 7	(3 x 10) -1	$\frac{3}{4}$ of 108
K	L	M	N	O
39.5 + 40.5	(9 X 9) - 8	(8 x 8) - 2	3.8 x 10	(70 x 40) ÷ 100
P	R	S	T	Y
19.2 + 6.8	60.1 – 23.1	3 X 9	(11.1 x 7) + 0.3	(12 x 6) - 2

27	31	29	27	78	28	73	31
62	77	73	30	27	29	37	30
38	79	31	29	73	62	29	78

Final Accusation

_____ murdered _____

On (date)_____ at (where) _____

Because (why)_____

Answer

The Space cadet 2 murdered alien 2 (Space cadet 1 £56, Alien 3 £60, Alien 1 £63, Space cadet 2 £72, Alien 2 £78, Space cadet 3 £84)
On 16th October
On "Mars"
Because "she stole my laser and helmet"

A	B	C	D	E	F	G	H	I
30		74	79	29			31	81
J	K	L	M	N	O	P	Q	R
	80	73	62	38	28	26		37
S	T	U	V	W	X	Y	Z	
27	78					77		