Mini Murder Mystery
Fractions, decimals & percentages

Who

One of the 4 characters below has murdered Mrs X. Analyse the number problems to discover the murderer.

Each one has said which of the numerical statements they believe are true or false. The innocent people have only made 1 or 2 errors. The guilty person has made 3 errors.

A) 40% of 500 is 200
B) Half of 390 is 180
C) 0.6 is the same as 6%
D) 0.25 is the same as 2.5

E) 0.6 x 300 = 50
F) ¾ x 90 = 60
G) Half of $\frac{8}{10}$ is $\frac{4}{5}$
H) 0.085 is the same as $8\frac{1}{2}$%

The mad scientist said
A is true
C is true
D is false
H is true

The silly boy said
E is true
G is false
B is false
D is false

The chef said
G is false
C is true
D is true
F is true

The artist said
D is true
C is false
E is true
B is false

Where

The murder took place where these are in ascending order

$$0.109, \frac{1}{10}, 11\%, \frac{90}{1000}, 0.099$$

Nottingham if this order is correct	$\frac{90}{1000}$, 0.099, $\frac{1}{10}$, 0.109, 11%
Derby if this order is correct	0.109, 0.099, $\frac{1}{10}$, $\frac{90}{1000}$, 11%
Sheffield if this order is correct	11% , 0.109, $\frac{1}{10}$, 0.099, $\frac{90}{1000}$

Leicester if this order is correct	$\frac{1}{10}$, $\frac{90}{1000}$, 11% , 0.099, 0.109

When   Calculate each answer to find the time and date

<table>
<tr><td rowspan="2">Add these fractions together

$\frac{5}{8}$ + 2$\frac{1}{6}$ =</td><td>A) 2$\frac{6}{14}$
The time was 6:14 pm</td><td>B) 2$\frac{19}{24}$
The time was 19:24</td></tr>
<tr><td>C) 2$\frac{6}{24}$
The time was 6:24 pm</td><td>D) $\frac{18}{14}$
The time was 8:14 pm</td></tr>
<tr><td rowspan="2">Subtract these fractions

2$\frac{2}{5}$ - $\frac{7}{10}$ =</td><td>A) 1 $\frac{1}{10}$
The date was 1/1/10</td><td>B) 1 $\frac{3}{10}$
The date was 1/3/10</td></tr>
<tr><td>C) 1$\frac{7}{10}$
The date was 1/7/10</td><td>D) 3 $\frac{7}{10}$
The date was 3/7/10</td></tr>
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Why.   Decode the message to find out why Mrs X was killed

a	b	c	d	e
20 ÷ 0.5	1.8 × $\frac{1}{2}$	4.5 + 6.5	36 × $\frac{3}{4}$	3 ÷ $\frac{1}{4}$
f	**g**	**h**	**i**	**j**
$\frac{2}{5}$ × 15	$\frac{3}{10}$ × 5	3$\frac{7}{8}$ + 1$\frac{1}{8}$	0.95 × 2	Half of 66
k	**l**	**m**	**n**	**o**
$\frac{7}{12}$ - $\frac{1}{6}$	6 ÷ $\frac{1}{5}$	$\frac{1}{4}$ × 2 × 2	0.7 × 0.7	$\frac{5}{8}$ × 4
p	**q**	**r**	**s**	**t**
5% of 40	26% as a decimal	15% of 50	$\frac{1}{4}$ × $\frac{4}{5}$	10% of 36
u	**v**	**w**	**x**	**y or z**
3 ÷ $\frac{3}{4}$	1.5 ÷ 2	4 - 3$\frac{3}{4}$	$\frac{3}{5}$ of 30	1$\frac{1}{2}$ × 6

$\frac{1}{5}$	5	12	27	1.9	27	0.49	3.6	30	1.9
$\frac{5}{12}$	12	6	7.5	40	11	3.6	1.9	2.5	0.49
$\frac{1}{5}$	40	0.49	27	1.9	30	2.5	0.75	12	3.6

5	12	1

Final Accusation

Who	
Where	
When	
Why	