Friday 3rd July 2020

To end the week we are going to complete a mystery problem. I hope that you enjoyed the last one.

As usual look at the suspects and find a way to eliminate each one if you can't print out the pack.

Try not to peak at the answer please.

The Mystery of the Missing Lance St. George's Day

Maths Mystery Game

After his brave battle against the dragon, Saint George has been invited by the king to join the knights and ladies at a celebratory banquet.

Unfortunately, when it is time to go, Saint George finds his lance is missing.

Can you solve the problems to see who discovers the whereabouts of Saint George's lance?

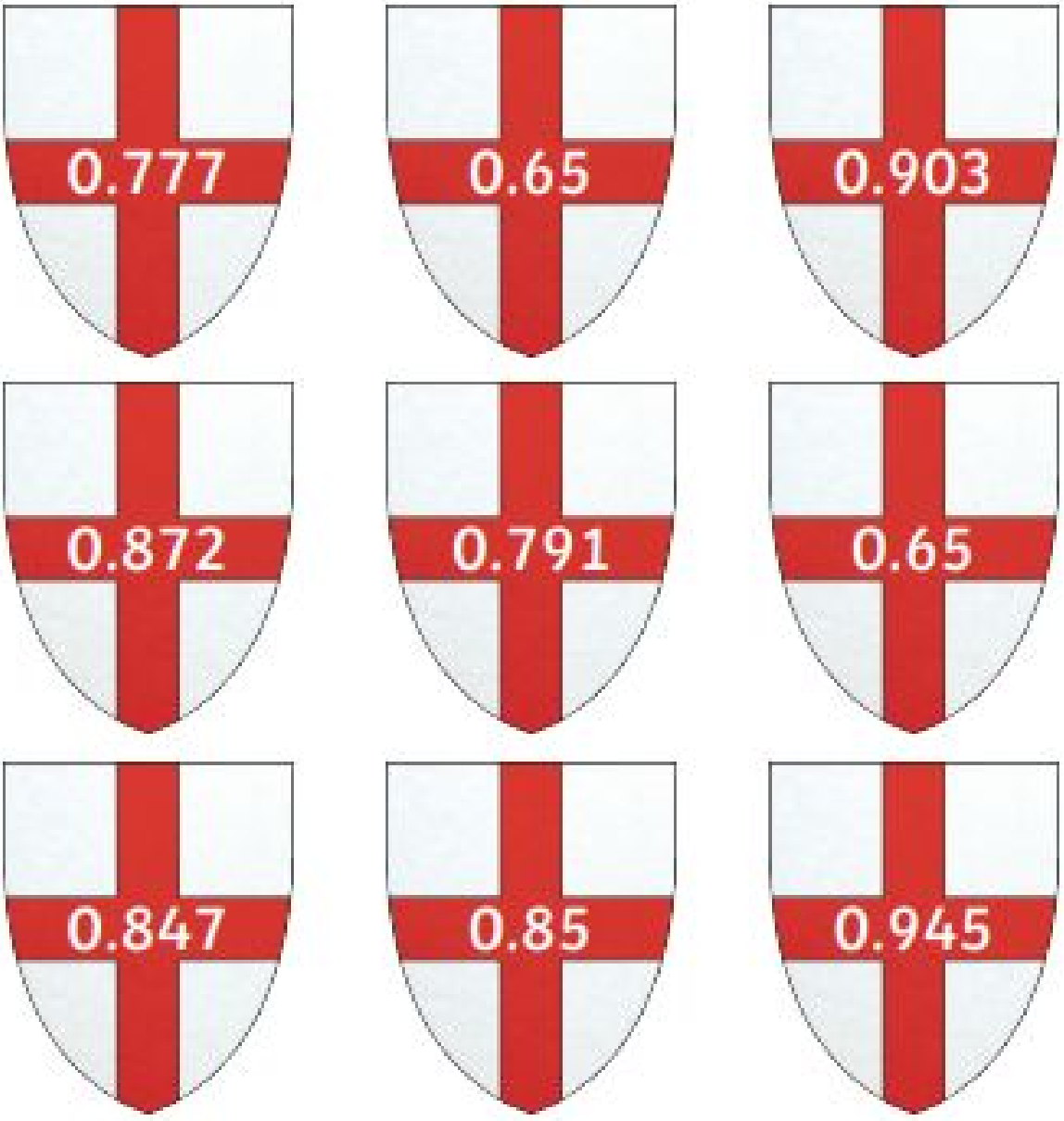
Suspects

Guest	Gender	Cloak Colour	Age	Horse Colour	Emblem
Sir Accolon	M	Red	45	Black	Lion
Dame Brisen	F	Blue	32	Black	Star
Lady Catherine	F	Red	48	Chestnut	Bull
Sir Dagonet	M	Blue	25	Grey	Cross
Sir Ector	M	Yellow	47	Brown	Cross
Lady la Fay	F	Yellow	42	Grey	Lion
Queen Guinevere	F	Blue	24	Brown	Star
Lady Heliabel	F	Green	41	Black	Lion
Lady Igraine	F	Blue	39	Chestnut	Bull
Sir John Haywood	M	Green	44	Grey	Bull
Sir Kay	M	Blue	27	Chestnut	Cross
Sir Lancelot	M	Green	33	Brown	Star
Lady Matilda	F	Yellow	22	Brown	Lion
Sir Nicholas	M	Red	40	Chestnut	Star
Sir Owain	M	Blue	23	Grey	Bull
Sir Percival	M	Yellow	50	Black	Bull
Red Knight	M	Red	26	Grey	Star
Sir Safir	M	Green	49	Black	Bull
Sir Tristram	M	Yellow	29	Brown	Lion
Sir Uther Pendragon	M	Blue	43	Brown	Cross
Lady Viviene	F	Green	38	Black	Cross
Lady Bianca	F	Red	28	Chestnut	Star

Clue 1: Rounding Decimals

Round the following decimals to the nearest tenth.

The solution that occurs the most gives a clue to who finds the lance.



0.7	0.8	0.9
The guest doesn't have a yellow cloak.	The guest doesn't have a blue cloak.	The guest doesn't have a green cloak.

Clue: The guest who finds the lance doesn't have a _____ cloak.

Clue 2: Multiply and Divide by 10, 100 and 1000

Find a path through the maze by colouring in the calculations that are correct.

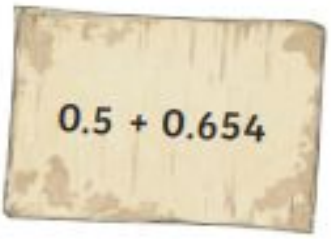
The path will reveal a clue about the emblem of the guest who finds the lance.

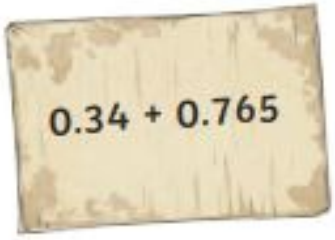
START	0.67 × 10 = 6.7	13.4 ÷ 10 = 1.34	2.09 × 100 = 209	46.7 ÷ 100 = 4.67
0.08 × 1000 = 80	7240 ÷ 1000 = 7.24	0.73 × 10 = 7.03	5 ÷ 10 = 0.5	9.07 × 100 = 907
50.5 ÷ 100 = 0.505	0.05 × 1000 = 5	607 ÷ 1000 = 0.607	0.46 × 10 = 46	4.03 ÷ 10 = 0.403
0.087 × 100 = 8.07	968 ÷ 100 = 9.68	0.039 × 1000 = 39	3009 ÷ 1000 = 3.009	7.08 × 10 = 70.8
56.7 ÷ 10 = 5.67	0.008 × 100 = 0.8	9 ÷ 100 = 0.009	6.08 × 1000 = 6080	406 ÷ 1000 = 4.06
8.009 × 10 = 80.09	0.67 ÷ 10 = 6.7	0.06 × 100 = 6	406 ÷ 1000 = 0.46	0.036 × 10 = 0.36
The emblem of the guest who finds the lance is not a cross or star.	The emblem of the guest who finds the lance is not a bull or star.	The emblem of the guest who finds the lance is not a bull or lion.	The emblem of the guest who finds the lance is not a cross or bull.	The emblem of the guest who finds the lance is not a lion or star.

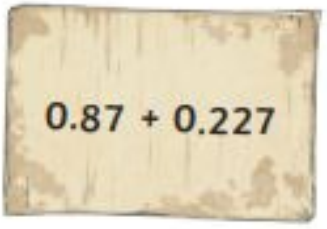
Clue 3: Adding and Subtracting Decimals

Match the answers to these calculations.

The one remaining answer box will give you a clue about the guest who finds the lance.







0.322 The guest's horse is grey or black.
1.067 The guest's horse is brown or black.
1.03 The guest's horse is grey or brown.
1.105 The guest's horse is chestnut or brown.
0.46 The guest's horse is chestnut or grey.
1.097 The guest's horse is chestnut or black.
0.103 The guest's horse is grey or chestnut.
0.156 The guest's horse is black or chestnut.
1.154 The guest's horse is black or brown.

Clue 4: Measures as Decimals

Check if these maths statements are correct. If it is right, put a tick. If it is wrong, put a cross.

Count the number of ticks and crosses.

If there are more ticks than crosses, the guest who finds the lance is female.

If there are more crosses than ticks, the guest who finds the lance is male.

	Right ✓	Wrong ✗
8.2kg + 670g = 14.9kg		
£10.45 – 87p = £9.58		
935ml more than 3.2l = 4.035l		
Subtract £1, 50p and 20p from £9.86 = £8.16		
2km + 465m = 6.65km		
578ml + 890ml = 1.468l		
35m + 298cm = 37.98m		
1700g + 3.4kg = 3.57kg		
£4.67 + 109p = £5.76		
Total		

Clue: The guest who finds the lance is a female/male.

(Circle the correct answer)

Clue 5

In each row, match the percentage that is equivalent to the first fraction.

The column with the most correct answers will tell you the age of the guest who finds the lance.

$\frac{1}{2}$	50%	10%	20%	12%
$\frac{2}{5}$	20%	50%	25%	40%
$\frac{7}{20}$	7%	35%	28%	70%
$\frac{4}{25}$	25%	40%	16%	4%
$\frac{4}{5}$	4%	40%	80%	75%
$\frac{7}{50}$	7%	5%	10%	14%
$\frac{34}{40}$	68%	85%	70%	34%
$\frac{3}{5}$	60%	30%	50%	55%
$\frac{36}{75}$	48%	36%	40%	50%
	22-28	29-35	36-42	43-50

Clue: The guest who finds the lance is aged _____.

The guest who is responsible for finding the lance is: _____.

Answers

Clue 1: Rounding Decimals

0.777 → 0.8	0.65 → 0.7	**0.903 → 0.9**
0.872 → 0.9	0.791 → 0.8	0.65 → 0.7
0.847 → 0.8	**0.85 → 0.9**	**0.945 → 0.9**

The guest who finds the lance doesn't have a **green** cloak.

Clue 2: Multiply and Divide by 10, 100 and 1000

START	0.67 × 10 = 6.7	13.4 ÷ 10 = 1.34	2.09 × 100 = 209	46.7 ÷ 100 = 4.67
0.08 × 1000 = 80	7240 ÷ 1000 = 7.24	0.73 × 10 = 7.03	5 ÷ 10 = 0.5	9.07 × 100 = 907
50.5 ÷ 100 = 0.505	0.05 × 1000 = 5	607 ÷ 1000 = 0.607	0.46 × 10 = 46	4.03 ÷ 10 = 0.403
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8.009 × 10 = 80.09	0.67 ÷ 10 = 6.7	0.06 × 100 = 6	406 ÷ 1000 = 0.46	0.036 × 10 = 0.36
The emblem of the guest who finds the lance is not a cross or star.	The emblem of the guest who finds the lance is not a bull or star.	The emblem of the guest who finds the lance is not a bull or lion.	The emblem of the guest who finds the lance is not a cross or bull.	The emblem of the guest who finds the lance is not a lion or star.

The emblem of the guest who finds the lance isn't a **cross** or **star**.

Clue 3: Adding and Subtracting Decimals

0.69 – 0.368 =	0.322	The guest's horse is grey or black.
0.077 + 0.99 =	1.067	The guest's horse is brown or black.
	1.03	The guest's horse is grey or brown.
0.34 + 0.765 =	1.105	The guest's horse is chestnut or brown.
0.82 – 0.36 =	0.46	The guest's horse is chestnut or grey.
0.87 + 0.227 =	1.097	The guest's horse is chestnut or black.
0.47 – 0.367 =	0.103	The guest's horse is grey or chestnut.
0.166 – 0.01 =	0.156	The guest's horse is black or chestnut.
0.5 + 0.654 =	1.154	The guest's horse is black or brown.

The guest who finds the lance has a **grey** or **brown** horse.

Clue 4: Measures as Decimals	Right ✓	Wrong ✗
8.2kg + 670g = 14.9kg		✗
£10.45 – 87p = £9.58	✓	
935ml more than 3.2l = 4.035l		✗
Subtract £1, 50p and 20p from £9.86 = £8.16	✓	
2km + 465m = 6.65km		✗
578ml + 890ml = 1.468l	✓	
35m + 298cm = 37.98m	✓	
1700g + 3.4kg = 3.57kg		✗
£4.67 + 109p = £5.76	✓	
Total	5	4

The guest who finds the lance is a **female**.

Clue 5: Equivalent Percentages

$\frac{1}{2}$	50%	10%	20%	12%
$\frac{2}{5}$	20%	50%	25%	40%
$\frac{7}{20}$	7%	35%	28%	70%
$\frac{4}{25}$	25%	40%	16%	4%
$\frac{4}{5}$	4%	40%	80%	75%
$\frac{7}{50}$	7%	5%	10%	14%
$\frac{34}{40}$	68%	85%	70%	34%
$\frac{3}{5}$	60%	30%	50%	55%
$\frac{36}{75}$	48%	36%	40%	50%
	22-28	**29-35**	**36-42**	**43-50**

The guest who finds the lance is aged **22-28**.

The guest who is responsible for finding the lance is Lady Matilda.