# MME

## GCSE MATHEMATICS

### Simple Probability

Please write clearly in block capitals

Forename:

Surname:

#### Materials

For this paper you must have:

mathematical instruments

You *can* use a calculator.



#### Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer all questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

#### Information

- · The marks for questions are shown in brackets.
- You may ask for graph paper, tracing paper and more answer paper. These must be tagged securely to this answer book.

#### Advice

· In all calculations, show clearly how you work out your answer.





	4	
3	Peter rolls an ordinary 6 sided dice.	
	It has faces marked 1, 2, 3, 4, 5 and 6.	
3(a)	Write down the probability that he rolls a 6.	[1 mark]
	Answer	
3(b)	Write down the probability that he rolls an even number.	[1 mark]
	Answer	
3(c)	Sam then rolls a different 6 sided dice 600 times.	
	Sam only rolls 20 sixes.	
	Give a possible explanation for this result	
		[1 mark]
	Answer	
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	Т	Jrn over 🕨

4	The probabilities of a spi table below.	nner landing on eacl	h of its three colours	are shown in the	
4(a)	Complete the table below	Ν.			[1 mark]
	Colour	Blue	Red	Green	
	Probability	$\frac{1}{3}$		$\frac{1}{6}$	
4(b)	If the spinner is spun 18 How many times would y	) times, /ou expect the spinn	er to land on blue?		
					[1 mark]
	Answe	er			
4(c)	The spinner is spun 180	times.			
	However the spinner onl	y lands on green 5 ti	mes.		
	Other than bias, provide	a reason for the out	come obtained?		[1 mark]
	Answe	er			
		Turn over for I	next question		

		0			
Ben flips an unbiased coin 3 times.					
He states he is more likely to get heads, tails, then heads than all tails for the three flips.					
Is he correct? Explain your answer.					
				[2 ma	
Three friends flip the same biased coin several times.					
I heir re	sults are shown in the tabl	e below.			
		Heads	Tails		
	Sonya	33	87		
	Clive	6	24		
	Lucy	17	43		
Fach of the friends calculates their own much shility of heads					
Which friend is likely to have the probability closest to the true probability?					
You must explain your answer.					
				[1 m	
	Answer				
	Answer	End of Questions			