

	Cent	re Nu	mber
Ca	ndida	te Nu	mber

General Certificate of Secondary Education 2019

### **Mathematics**

Unit M5 Paper 2 (With calculator) Foundation Tier





\*GMC52\*

#### [GMC52] THURSDAY 6 JUNE, 10.45am–11.45am

#### TIME

1 hour.

#### **INSTRUCTIONS TO CANDIDATES**

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

You must answer the questions in the spaces provided.

**Do not write outside the boxed area on each page, on blank pages or tracing paper.** Complete in black ink only. **Do not write with a gel pen.** 

Answer **all fourteen** questions.

All working should be clearly shown in the spaces provided. Marks may be awarded for partially correct solutions.

You may use a calculator for this paper.

#### INFORMATION FOR CANDIDATES

The total mark for this paper is 50.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

You should have a calculator, ruler, compasses and a protractor.

The Formula Sheet is on page 2.

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#### \*20GMC5201\*



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<b>(a)</b>	Which imperial unit would be used to measure
	(i) the distance from Enniskillen to Belfast,
	Answer [1]
	(ii) the capacity of a carton of milk?
	Answer [1]
(b)	Explain how to change pounds into kilograms.
	[2]

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	there are more bo all pupils are 13 o there are the same everyone studies	or 14 years old; e number of 13		as 14-year	-olds;	
ne	e pupil is taken at rand	om from Year	10			
Vh	at is the probability that	at the pupil				
ı)	is a girl?					
	Circle the correct answ	wer.				
	impossible	unlikely	evens	likely	certain	[1]
<b>)</b> )	is 14 years old?					
	Circle the correct answ	wer.				
	impossible	unlikely	evens	likely	certain	[1]
:)	does <b>not</b> study French	1?				
	Circle the correct answ	wer.				
	impossible	unlikely	evens	likely	certain	[1]
						[Turn over

\*20GMC5205\*

4	(a)	Jenny writes the first six square numbers as	
		2, 4, 9, 16, 25, 36	
		Explain why she is wrong.	
		Answer	[1]
	(b)	Part of the sequence of triangular numbers is shown.	
		21, 28, 36, 45, 55, 66	
		(i) Which triangular number comes directly before 21?	
		Answer	[1]
		(ii) Write down the smallest triangular number which is greater than 10	0
		Answer	[1]
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			Answer	[2]
		How many pints is this?		
	(b)	Jan has 15 litres of oil.		
			Answer	[2]
		Use 1 pint = $0.568$ litres.		
		How many litres is this?		
5	(a)	Joe has 12 pints of oil.		

\*20GMC5207\*

6	Tickets numbered from 1 to 81 are placed in a hat. One winning ticket is taken at random.
	(a) What is the probability that the winning ticket is the number 70?
	Answer [1
	(b) What is the probability that the winning ticket is a number bigger than 70?
	Answer [2
	(c) Explain why the probability of the winning ticket having an even number is not $\frac{1}{2}$
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\*20GMC5210\*

9	<b>(a)</b>	In a choir there are 36 female and 24 male singers.
		Write down the ratio of female to male singers in its simplest form.
		Answer [2]
	(b)	There are 52 people in an orchestra. The ratio of males to females is 3:1 Calculate the number of males and females in the orchestra.
		Answer males, females [2]
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[1]

**10** There are 32 pupils in a class and all were present on Monday.

On Monday the teacher asked each pupil their favourite colour.

She recorded the results for green, blue and yellow accurately in a table.

	Green	Blue	Yellow	Total
Girls	3	5	4	12
Boys	4	7	2	13
Total	7	12	6	25

- (a) Give a reason why the total number of boys and girls in the table is not 32
- (b) There are 18 girls in the class.

What is the probability that a girl said the colour blue?

Answer \_\_\_\_\_ [1]

(c) What is the probability that a pupil in the class **did not** say green?

Answer [1]

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\*20GMC5213\*



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(a) During the total journey, for how long was	s Ryan not moving?	
	Answer	minutes [1]
<b>(b)</b> How far is Ryan from Maden at 0930?		
	Answer	km [1]
(a) Coloulate the evene of an end for the state	ioumou	
(c) Calculate the average speed for the whole	journey.	
State the units of your answer.		
	Answer	[3]
		[Turn over

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12 Sue bought 100 ml of suncream for £5.40 in Belfast.While in Spain she bought 150 ml of suncream for 8.80 euro.The exchange rate was £1 = 1.07 euro.

Was it better value in Belfast or in Spain?

Show your working.

Answer [5]

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\*20GMC5216\*

**13** There are four possible results from a music examination. Result 11942

**Probability**  $\overline{2}$  $\overline{20}$  $\overline{10}$ The probabilities of some results are recorded in the table. (a) What is the probability of fail? Answer [2] (b) What is the probability of credit or distinction? Answer [2] [Turn over 

Fail

Pass

1

Credit

3

Distinction

1



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For Examiner's use only				
Question Number	Marks			
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**Examiner Number** 

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