Please write clearly in	ו block capitals.	
Centre number	Candidate number	
Surname	HILL	_
Forename(s)	DAVID	_
Candidate signature		_
	I declare this is my own work.	

## GCSE MATHEMATICS

Foundation Tier

Paper 1 Non-Calculator

Wednesday 8 November 2023 Morning

#### Materials

For this paper you must have:

- mathematical instruments
- the Formulae Sheet (enclosed).

You must **not** 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.
- If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).
- 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.
- The maximum mark for this paper is 80.
- You may ask for more answer paper, graph paper and tracing paper. These must be tagged securely to this answer book.

### Advice

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



Time allowed: 1 hour 30 minutes

For Examiner's Use				
Pages	Mark			
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				
TOTAL				

IB/M/Nov23/E13











box







• A shape has **rotational symmetry** when it can be rotated around its center point by a specific angle without changing its appearance

Turn over for the next question



Turn over ►









Do not write outside the box

8 Shamira uses a tally chart to record the vehicles passing her school. Here is her chart with the tallies.

Each 5-bar gate (₩) represents 5 vehicles.

		Vehicle	Tally	Frequency
		Car	₩ ₩ ₩ ₩ III	23
		Bus	HH HH	12
		Van	HH III	9
		Lorry		4
8 (a)	Shamir "The beca	a says, number of c ause cars ha	ars is more than the <b>total</b> of the other vehic ave four 5-bar gates and the others only hav	les ve three 5-bar gates."
	ls she d	correct?		
	Tick a b	DOX.		
		Yes	No	
5	Show v	vorking to su	ipport your answer.	[2 mar
	5	HAMIRA	HAS NOT INTERPRETED THE	TALLY SYSTEM
		RRECTLY,		
	Nu	MBEL OF	TARS = 23 OTHER VEHICLES	= 12
				٩

23 ~ 25



4





Turn over ►

Put the whole numbers 1 to 12 into the boxes to make the calculations correct.  
Only use each number once.  

$$[3 marks]$$

$$1 + 2 + 4 = 7$$

$$1 + 2 + 4 = 7$$

$$1 + 1 + 12 = 32$$

$$3 + 5 + 1 = 15$$

$$6 + 8 + 10 = 24$$
Start with highest number (32) using highest numbers possible. Work your way down to lowest number 7.











































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