

**GCSE
MATHEMATICS
8300/1F**

Foundation Tier

Paper 1 Non-Calculator

Shadow paper based on June 2023 paper

Mark scheme

June 2023

First Half

Version: 1.0

Q	Answer	Mark	Comments
1(a)	20	B1	

Q	Answer	Mark	Comments
1(b)	36	B1	

Q	Answer	Mark	Comments
1(c)	27 and 18	B1	either order

Q	Answer	Mark	Comments
1(d)	7	B1	

Q	Answer	Mark	Comments
2(a)	[49, 53]	B1	may be seen on diagram but answer line takes precedence
	Additional Guidance		
	Answer in a different unit		B0

Q	Answer	Mark	Comments
2(b)	[20, 24]	B1	may be seen on diagram but answer line takes precedence

Q	Answer	Mark	Comments
2(c)	16.5 or $16\frac{1}{2}$	B1	

Q	Answer	Mark	Comments
2(d)	7 cm by 4 cm rectangle drawn	B1	
	Additional Guidance		
	Mark intention		
	Allow a 7 cm by 4 cm rectangle drawn that does not use the given side		

Q	Answer	Mark	Comments
3(a)	10 or +10	B1	

Q	Answer	Mark	Comments
3(b)	–24	B1	

Q	Answer	Mark	Comments
3(c)	16 or +16	B1	

Q	Answer	Mark	Comments
3(d)	8 or +8	B1	

Q	Answer	Mark	Comments
4	$\frac{3}{10}$	B2	B1 $\frac{12}{40}$ or $\frac{6}{20}$ or 3 out of 10 oe fraction, decimal or percentage or their fraction fully simplified
	Additional Guidance		
	$\frac{12}{40} = \frac{10}{3}$ $\frac{1.2}{4}$		B1 B1

Q	Answer	Mark	Comments
5	$12 \div 2$ or 6 or 12×3 or 36 or 40.9(0) or $4.9(0) - 1.4(0)$ or 3.5(0)	M1	oe
	$3 \times 12 \div 2$ or 6×3 or 18 or 19.4(0)	M1	oe implies M2
	$4.9(0) - 1.4(0) + 3 \times 12 \div 2$ or $40.9(0) - 19.4(0)$ or 21.5	M1dep	oe full method to find total cost dep on M2
	21.50 or 2150p	A1	SC3 16.5(0) or 75.5(0) or 7550(p)
	Additional Guidance		
	SC3 16.50 from 3 regular popcorn tub and 1 cinema ticket		
	SC3 75.5(0) from doubling the cost of a cinema ticket instead of halving		
	Condone (£)21.50p		M1M1M1A1

Q	Answer	Mark	Comments
6(a)	$\frac{17}{7}$	B1	oe improper fraction
	Additional Guidance		
	Ignore attempts to simplify after correct answer seen		

Q	Answer	Mark	Comments
6(b)	$\frac{23}{100}$	B1	oe fraction
	Additional Guidance		
	Ignore attempts to simplify after correct answer seen		

Q	Answer	Mark	Comments
7	(White =) 32 (cars) or 4 (symbols) or (Black =) 20 (cars) or 2.5 (symbols) or (Blue =) 16 (cars) or 2 (symbols) or (Other =) 12 (cars) or 1.5 (symbols) or (total =) 80 (cars) or 10 (symbols) or evidence of addition with answer of 10 (symbols) or $100 \div 8$ or 12.5 (symbols)	M1	
	100 – their 32 – their 20 – their 16 – their 12 or $100 - 80 (= 20)$ or 2 values for Red and Silver with a total of 20 or their $12.5 - 10$ or 2.5	M1dep	oe at least one of 32, 20, 16, 12 correct may be on diagram
	8 and 12 or Silver = 1 full symbol or Red = 1 full and 1 half symbol	A1	either order, may be on diagram
	Silver = 1 full symbol and Red = 1 full and 1 half symbol	A1ft	ft their 20 days (must be an even number) where Red is four more than Silver
	Additional Guidance		
	Mark intention for drawings, quarter and half symbol any orientation or angle. Must be attempt at correct size		
	20 with no working seen or their symbols totalling 10 quarters		M1M1

Q	Answer	Mark	Comments
8(a)	2×10 or 20	M1	oe
	12	A1	

Q	Answer	Mark	Comments
8(b)	$-22 + 16$ or -6 or $-22 = 2A - 16$ or $A = \frac{T+B}{2}$	M1	
	their $-6 \div 2$	M1dep	
	-3	A1	
	Additional Guidance		
	Embedded answer of -3		M1M1A0
	$-22 = 2A - 16$ may use a different letter or symbol for A but not T or B		

Q	Answer	Mark	Comments
9	All 3 correct matches	B3	B1 for each correct match
	Additional Guidance		
	To score, a box on the left must be joined to just the correct box on the right.		
			B3
	Two lines from a left-hand box is choice		B0

Q	Answer	Mark	Comments
10	(A =) 30	B1	may be implied by correct answer
	(B =) 8	B1	may be implied by correct answer
	240	B1ft	SC2 ($96 \times 8 =$) 768 SC2 ($-6 \times 30 =$) -180 SC1 ($12 \times 2 + 6 \times 11 - (10 - 7) =$) 87
	Additional Guidance		
	Answer 240 with no incorrect values seen for A and B		B1B1B1

Q	Answer	Mark	Comments
11	$18 \div 4.5$	M1	oe
	4	A1	

Q	Answer	Mark	Comments
12	100	B1	

Q	Answer	Mark	Comments
	Alternative method 1 – using the given scale		
13	(O) $16 \div 4$ or (A) $8 \div 2$ or 4 or (O) $4 \div 16$ or (A) $2 \div 8$ or $\frac{1}{4}$	M1	oe
	their 4×3 or $3 \div$ their $\frac{1}{4}$ or their $4 \times$ their $(4 + 2 + 3) - 16 - 8$ or 12	M1dep	16 – 4 implies M2 may be on diagram
	Correct width bar, in the correct position, drawn to height of 12	A1	mark intention, ignore any shading
	Alternative method 2 – using squares		
	(O) $8 \div 4$ or (A) $4 \div 2$ or 2 (squares)	M1	
	their 2×3 or 6 (squares)	M1dep	8 – 2 implies M2 may be on diagram
	Correct width bar, in the correct position, drawn to height of 12	A1	mark intention, ignore any shading
	Additional Guidance		
	$(16 + 8) \div (4 + 2)$ $(8 + 4) \div (4 + 2)$	M1 M1	

Q	Answer	Mark	Comments
14	Valid statement about proportion	B1	eg there were more guests than members
	Valid statement about average	B1	eg the average number of hours was greater for the members
	Valid statement about spread	B1	eg the visiting times of the guests were more spread out
	Additional Guidance		
	Condone irrelevant statements with correct statements but do not award a correct statement with a contradictory statement		
	Accept non-members for guests		
	Proportion statements		
	There were more guests		B1
	They were mostly guests / More than half were guests		B1
	There were 36% more guests than members		B1
	Fewer members (than guests)		B1
	The guests were 68%, the members were (only) 32%		B1
	The guests were 68, the members were (only) 32		B0
	The difference is 36%		B0
	There were 32% more guests (calculation error)		B0
	guests visit the ski centre more often		B0
	There were 32% members		B0

Question 14 Additional Guidance continues on the next page

14 cont	Average statements	
	The members had a greater mean	B1
	The members visited for 1.5 (hours) more (on average)	B1
	The members visited for longer (on average) (than the guests)	B1
	Overall the members spent longer (at the ski centre) (on average)	B1
	The members' mean was 3.5 (hours) and the guests' was 2 (hours)	B1
	The members' was 3.5 and the guests' was 2 (no mention of average)	B0
	The difference in mean hours is 1.5	B0
	Spread statements	
	The members' times were more consistent	B1
	The guests' times varied more	B1
	The guests had a greater range	B1
	The range of the guests was 1 (hours) more	B1
	Members' range was 3 (hours), guests' (range) was 4 (hours)	B1
	Members were 3, guests were 4 (ambiguous)	B0
	Members visited for 3 hours, guests for 4 hours (referencing mean)	B0
	The difference in range is 1 hour	B0
	The range of the guests is high	B0

Q	Answer	Mark	Comments
15	3×4 or 12 or 5×6 or 30 or 18 or 0.4	M1	oe
	(their 30 – their 12) $\div$ their 30 or $1 - \frac{12}{30}$ or $\frac{18}{30}$ or $1 - 0.4$ or 0.6 or 40(%)	M1dep	
	60	A1	
	Additional Guidance		
	Up to M2 may be awarded for correct work seen in multiple attempts even if not subsequently used		
	Ignore any units		

Q	Answer	Mark	Comments
16	$60 \div 15$ or 4 or $15 \div 60$ or $\frac{1}{4}$ or $12 \div 15$ or 0.8 or $15 \div 12$ or 1.25 or $15 + 15 + 15 + 15$	M1	oe
	their 4×12 or $18 \div$ their $\frac{1}{4}$ or their 0.8×60 or $60 \div$ their 1.25 or $12 + 12 + 12 + 12$	M1dep	oe full method to get to answer
	48	A1	
	Additional Guidance		
	Up to M2 may be awarded for multiple attempts if no answer chosen		
	For up to M2 ignore any units		