

GCSE MARKING SCHEME

AUTUMN 2019

GCSE
MATHEMATICS – UNIT 2
FOUNDATION TIER
3300U20-1

INTRODUCTION

This marking scheme was used by WJEC for the 2019 examination. It was finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conference was held shortly after the paper was taken so that reference could be made to the full range of candidates' responses, with photocopied scripts forming the basis of discussion. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners.

It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conference, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about this marking scheme.

WJEC GCSE MATHEMATICS

AUTUMN 2019 MARK SCHEME

GCSE MATHEMATICS		Mark	Comments
	Unit 2: Foundation Tier		Comments
1.	72 150	B1	
	52	B1	
	59 168	B1	
2 ()	158	B1	1 100 1 101
2.(a)	(44), 88, 132, 176, 220	B1	Ignore any additional multiples
2.(b)	33	B1	
3.	>	B2	For all four correct.
	<		B1 for any three correct.
	>		
4	<		
4.	(Perimeter of triangle = 14 + 14 + 14)	D4	Maria Ing. Second Social
	= 42 (cm)	B1	May be implied.
	(Length of side of square =) 42 ÷ 4	M1	F.T. 'their 42' provided ≠ 14
	= 10.5 (cm)	A1	
00147	0	004	For OOA condidates will be seen to die
<u>OCW</u>	Organisation and Communication.	OC1	For OC1, candidates will be expected to:
			present their response in a structured way
			explain to the reader what they are doing at
			each step of their response
			 lay out their explanation and working in a
			way that is clear and logical
			 write a conclusion that draws together their
			results and explains what their answer
			means.
	A	10/4	For MAA
	Accuracy of writing.	W1	For W1, candidates will be expected to:
			show all their working
			 make few, if any, errors in spelling,
			punctuation and grammar
			use correct mathematical form in their
			working
			use appropriate terminology, units, etc
5.	0.1(0) 10%	B4	B1 for each correct response.
	0 00		
	<u>2</u> 0.08 25		
6 (-)		D4	4 804
6.(a)	32.16	B1	Accept $32\frac{4}{25}$ and $\frac{804}{25}$. B0 for $804 \div 25$.
6 (h)	0.4	B1	
6.(b)	U. 4	וסו	Accept $\frac{2}{5}$. B0 for 2 ÷ 5 or <u>1.6</u>
			4
7.(a)	trapezium	B1	
7.(b)	cuboid	B1	
7.(c)	a reflex	B1	
	angle		
7.(d)	parallelogram	B1	
8.(a)	Point R plotted correctly	B1	
8.(b)	(-3, 2)	B1	
9.	275	B2	B1 for sight of 301.
	-		·g··· -: ·

10.(a) 1, 4 and 25	В3	Answer space takes precedence. Accept 1², 2² and 5². B2 for writing three numbers which add to 30, two of which are square (e.g. 16, 9, 5). B1 for writing three numbers: • at least two of which are square, OR • which add to 30, one of which is square, OR • which are all square. SC2 for an answer of 1, 2 and 5 with correct working. SC1 for an unsupported answer of 1, 2 and 5
10.(b) 1, 5, 7, 7 OR 3, 5, 7, 7	В3	Answer space takes precedence. B2 for writing four odd and positive numbers (not 7, 7, 7, 7) which fulfil one of the conditions: • the mode of the numbers is 7 • the median of the numbers is 6 OR for an answer which satisfies both conditions but includes an even number (e.g. 2, 5, 7, 7) B1 for writing four numbers which fulfil only one of the conditions: • the mode of the numbers is 7 • the median of the numbers is 6 OR for an answer of 7, 7, 7, 7.
11.(a) 0·125 × 1176 or equivalent. = 147 ISW	M1 A1	
11.(b) 4·7	B2	If further incorrect work shown e.g. '4·7 = 5' then allow B1 only. B1 for sight of 4·6 or 4·68() or 4·70
12.	B1 M1 A1	F.T. 128 - 'their f'.
Alternative method $f = 73(^{\circ})$ g = 180 - (180 - 128) - 73 $= 55(^{\circ})$	B1 M1 A1	FT 'their f'.
13. (1) 5 (9)		B1 for each. No F.T.
(7) (8) 2 9 (4) (1)	В3	
14.(a) <u>1</u> 12	B1	
14.(b) D	B1	
14.(c) $\frac{1}{3}$	B1	
15. Sight of 6·25 (hrs) OR 375 (min) (Planning =) $\frac{2}{5} \times 6\cdot25$ OR $\frac{2}{5} \times 375$	B1 M1	F.T. 'their time' in hours or in minutes. May be seen in parts (1/5 th and then 2/5ths)
= 2·5 (hrs) OR 150 (min)	A1	[Note: 2/5 × 6·15 OR 2/5 × 615 is B0M1(FT) = 2·46(hrs) OR 246(min) A1(FT) BUT A0 if 2·46 then used as 2h 46m]
(Remainder of work = 6·25 - 2·5 OR 375 - 150 =) 3·75 (hrs) OR 225 (min) = 3 hours 45 minutes	B1 B1	F.T. 'their derived times' using same units. F.T. correct conversion of 'their times', correct to the nearest minute (rounded or truncated), if of equivalent difficulty. Allow unambiguous indication of units.

B1 B1	
M1 A1 B1	F.T. 'their time' in hours or in minutes. F.T. correct conversion of 'their times', correct to the nearest minute (rounded or truncated), if of equivalent difficulty. Allow unambiguous indication of units.
M1 A1 A1 M1 A1	2·4 hrs may be given as 2hrs 24min. C.A.O. F.T. 'their derived planning time' in hours and min.
B1 M1 A1	3·6 hrs may be given as 3hrs 36min.
M1 A1	F.T. 'their derived times' in hours and min.
B2	Allow for an attempt at adding the correct two pairs of numbers. B1(plus previous B1) for a ratio equivalent to 3: 1 e.g. 540: 180. Allow B1B1 for a final answer of 1: 3. If no marks gained allow SC1 for a final answer of 89: 55 OR 55: 89 (Llandudno: Aberystwyth ratio.)
B2	0.618() or 0.62 or 61.8()% or 62% implies B2. B1 for x/720 if x < 720. B1 for 445/y if y>445. Allow B1 for 0.61 or 61%. Penalise -1 for incorrect notation, e.g. 445 out of 720.
B1 B1 B1	F.T. until 2^{nd} error. Adding 'unlike terms' eg $12x + 8 = 20x$ or $3x + 2 = 5x$ to be taken as two errors. Mark final answer. Allow $0.33(33)$ A final answer of 0.3 is (B1B1)B0.
B1 B1 B1	B1 for 3x + 5 × 2x OR for sight of 10x Mark final answer. OR F.T. 180 – a.
	M1 A1 A1 A1 A1 A1 B1 B2 B2 B1 B1 B1 B1 B1