wjec cbac

GCSE MARKING SCHEME

SUMMER 2017

GCSE (NEW) MATHEMATICS - UNIT 2 (FOUNDATION) 3300U20-1

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INTRODUCTION

This marking scheme was used by WJEC for the 2017 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.

	GCSE Mathematics		
	Unit 2: Foundation Tier	Mark	MARK SCHEME
	Summer 2017	Mark	Comments
1.	778	B1	
	905	B1	
	35	B1	
	645	B1	
2.	<	B2	For all 4 correct.
	>		B1 for any three correct.
	<		Penalise once only for use of \leq or \geq .
	<		,
3.(a)(i)	Circle radius 5cm ± 2mm	B1	Use overlav.
			Continuous line that is drawn with a pair of
			compasses
			Condone failure to use x as the centre
3 (a)(ii)	10 cm or equivalent	B1	E T their circle drawn with a pair of compasses
5.(a)(ii)			Lipite required for B1
3 (b)	Equilatoral triangle		
3.(D)		ום ים	Answers in the space provided take precedence
4.	5, 9, 10	DO	Answers in the spaces provided take precedence.
			B2 for meeting 3 of the 4 conditions:
			the three numbers are different
			one number is a square number
			 the other two numbers are factors of 20
			 the sum of the three numbers is 24
			B1 for meeting 2 conditions OR
			for listing either three different square numbers
			or three different factors of 20.
5.(a)	3	B1	
5.(b)	Square	B1	Accept regular guadrilateral.
6.(a)	5530	B2	B1 for 5529(.411) OR B1 for 5520
6.(b)	32.36	B2	B1 for 32.35(889) OR B1 for 32.4
7.	18	B2	B1 for either 24 or -6. B0 for 24x or -6v.
8 Inter	ntion to halve 9 minutes 18 seconds OR	M1	
01 11101	double 4 minutes 48 seconds		
NO	with sight of	A1	Accept equivalent statements e.g. Fira is wrong
4 mir	nutes 39 seconds OR 9 minutes 36 seconds	,,,	Allow incorrect notation for time
	or 279 (seconds) AND 288 (seconds)		e = 4.39, 9.36 (use of decimal points)
	or 558 (seconds) AND 576 (seconds)		
			Alternative method 1
			Correctly finding the difference between the two
			times as 4 minutes 20 seconds OP 270 seconds
			NO with comparison or a 4 minutos 20 seconds is
			NO, with comparison e.g. 4 minutes 50 seconds is
			less indit 4 minutes 40 seconds OR 200
			Seconds is more than 270 seconds A1
			Alternative Method 2
			Anternative WellIOU Z
			Converting both times to seconds, before dividing
			one quantity by the other M1
			NO, with sight of 2(.06) OR 0.4(84375) A1
			If no marke, award CO4 for attacentic s to find the
			II no marks, award SC1 for attempting to find the
			difference between the two times and comparing
			this with 4 minutes 48 seconds.

GCSE Mathematics		
Unit 2: Foundation Tier	Mark	MARK SCHEME
Summer 2017		Comments
9. Odd numbers 1 3 2 5 4	B2	B2 for all fully correct Award B1 for 3 or 4 correct <i>Any duplicates are marked as incorrect.</i>
10. (Width of square = $56 \div 4 =$) 14 (cm)	B1	
(Area of square =) 14^2	M1	F.T. 'their width', provided \neq 56.
= 196 (cm ²)	A1	
Organisation and Communication		 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 explanations and working in a way that is clear and logical
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.
11.(a) 3	B1	
11.(b) unlikely	B1	
11.(c)	B1	Any indication of 1/4 to 1/2 exclusive.
12.(a) $0.39 \times (\pounds)576$ or equivalent = $(\pounds)224.64$ ISW	M1 A1	Do not accept approximating e.g. 10%=£58 etc. Allow £224.64p and 22464p but not 22464.
12.(b) 43	B2	B1 for sight of $42.8()$ or 42.9 or $42^{6}/_{7}$ or $300/7$. Allow SC1 for 42. B0 for 300 \div 7.
12.(c) 40	B1	Accept embedded answers e.g. $0.25 \times 40 = 10$.
12.(d) <u>1</u> or equivalent fraction 12	B1	Mark final answer. B0 for <u>0.5</u> , 0.083 etc. 6
12.(e) <u>10</u> 12	B1	
13. FALSE TRUE TRUE TRUE FALSE	B3	For all 5 correct. B2 for 4 correct. B1 for 3 correct.
14. (7 × 3 =) 21	B2	B1 for sight of 7 x a (or a x 7) OR b x 3 (or $3 \times b$) OR 7 OR 3 unambiguously identified.
15.(a) 15	B1	
15.(b) 5	B1	Allow unambiguous indication of an answer of 5.

GCSE Mathematics Unit 2: Foundation Tier Summer 2017	Mark	MARK SCHEME Comments
16. 8, 15 and 16	B2	All three numbers must be less than 25.
OR 9, 13 and 17		B1 for three numbers with a range of 8.
OR 10, 11 and 18.	5.0	B1 for three numbers whose total = 39.
17.(a) -3 , -1 and 1	B2	B1 for any two correct in the correct positions OR
17 (b) 4b + 2	D0	B1 for -5 , -3 and -1 OR B1 for -1 , 1 and 3.
17.(0) 411 + 3	D2	DT IOF Signt OF 411 OF 14 (Dut HOL 411 K≠1). Mark final answer
18 (a) 0.26	B1	B0 for $13/50$ $26/100$ etc
18 (b) 7 x 3000 or equivalent	M1	Only allow misread if 300 or 30000 used
50		
= 420	A1	420/3000 gains M1A0. Mark final answer.
18.(c) <u>1</u> × 3000 or equivalent	M1	Only allow misread if 300 or 30000 used.
6		
= 500	A1	500/3000 gains M1A0. Mark final answer.
		Allow M1A0 for 480 or 510 or 498 as implying
		1/6 to be 0.16 or 0.17 or 0.166.
19.		Answers/working may be seen on diagram.
(Angle DOC or exterior angle =) $\frac{360}{5}$	M1	
5 = 72(°)	A1	Sight of 72 (even x = 72) gains M1A1.
(x =) <u>180 – 72</u>	M1	FT 'their 72' (but not 60°).
2		
= 54(°)	A1	
		Alternative method
		(Sum of interior angles =)
		$(5-2)\times 180^\circ$ or equivalent M1
		= 540(°) A1
		<i>FT</i> 'their interior angle sum' (≠ 900)
		$(X =) \frac{1}{2} \times (540 \div 5)$ M1
20		= 34(7) A1
$(BC -) (24 - 2x^{7})/2$	M1	A clearly shown incorrect method for finding CD is
(DC =) (24 - 2XI)/2 (BC -) 5(cm)		M040 otherwise CD-4(cm) implies this M141
$(DC =) O(UII)$ $(Area CDEE -) (7 + 3) \times (9 - 5) \text{ or equivalent}$		F T 'their derived 5' OR
$\frac{1}{2}$		F.T. $(7 + 3) \times$ 'their stated or shown length CD (<9)'
		2
		Allow M1 for correct intent e.g. $(7 + 3 \times 4 \div 2)$ then
		A0.
$= 20 (cm^2)$	A1	Ignore any further attempt to find total area of
		whole shape if area of CDEF seen.

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