GCSE MARKING SCHEME

AUTUMN 2021

**GCSE
MATHEMATICS
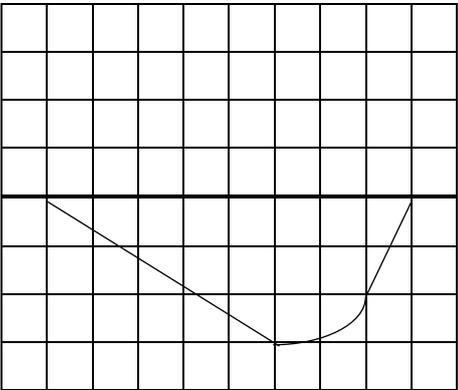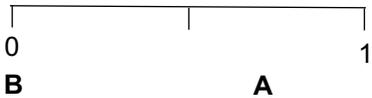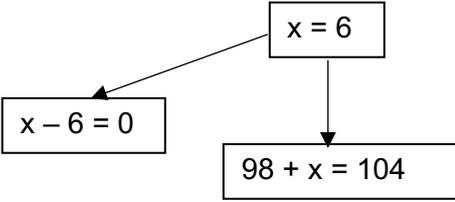UNIT 1 – FOUNDATION TIER
3300U10-1**

INTRODUCTION

This marking scheme was used by WJEC for the 2021 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.

Unit 1: Foundation Tier	Mark	Comments
1.(a) Ninety-five thousand and forty-eight	B1	
1.(b) 931	B1	
1.(c) 1250	B1	
1.(d) 208	B1	
1.(e) 1,2,3,6,9,18	B2	B1 for 4 or 5 correct and 0 incorrect B1 for 5 or 6 correct and 1 incorrect Ignore repeated numbers Accept products 1×18, 2×9, 3×6
2.(a) 94 (mm)	B1	Accept 92 to 96 (mm)
2.(b) 136(°)	B1	Accept 134 to 138 (°)
3.(a) 16	B1	
3.(b) ¾	B1	Mark final answer.
3.(c) 28	B1	
4. 	B2	B1 for correct longer straight line. B1 for correct curve AND shorter straight line. The lines must pass through the correct points.
5.(a) 4.3 x 1000 4300 (g)	M1 A1	
5.(b) 3 × 100 ÷ 6 50 (cm)	M1 A1	If M0 A0, award SC1 for sight of 300(cm) or 0.5(m).
6. 	B1 B1	A should be between 0.6 and 0.8 B should be at 0

7. $x = 6$ $x - 6 = 0$ $98 + x = 104$	B2	B1 for 2 correct answers and 1 incorrect answer B1 for 1 correct answer and 1 incorrect answer B1 for 1 correct answer and 0 incorrect answer

8.   **Use** of 360(°), e.g. 8x = 360(°)
   (x =) 360/8(°)
    (x =) 45(°)
	B1
	 M1
	 A1
		M1 implies B1
		
		 If B0 M0 A0, award SC1 for x = 22.5(°) from accurate working from 8x = 180(°)

9. (Perimeter of rectangle =) 15+15+7+7
                 = 44 (cm)
   (Length of side of square =) 44 ÷ 4 (cm)
                  11 (cm)
	M1
	 A1
	 M1
	 A1
		
		 FT 'their stated 44', but not 15 or 7.

9. OCW Organisation and Communication Accuracy of Writing	OC1 W1	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 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
10.(a) (x =) 180 – 90 – 37 or equivalent. = 53(°)	M1 A1	

10.(b)   (a =) 51(°)
   (b =) 360 – (51 + 82 + 153) or equivalent.
 	
           = 74(°)
	B1
	 M1
	
	 A1
		FT 'their 51', i.e. 125 – 'their 51'
		 provided 'their 51' < 125.

11.(a) $\frac{1}{9}$	B1	
11.(b) 0·016	B1	
11.(c) 0·015	B1	
12.(a) ¹⁄₁₀ or 0·1	B1	Mark final answer.
12.(b) Sight of 27 AND 4 (27 ÷ 4 =) 6·75	B1 B1	 FT if at least 27 or 4 correct and of equivalent difficulty (i.e. <u>not</u> leading to a whole number answer). Answer must be a decimal
13. (Volume =) 5 × 3 × 2 = 30 (cm³)	M1 A1	Any additional calculation e.g. 30 ÷ 2 = 15 is M0.

14.	Sight of 9 AND 49	B1	
	$n + 9 = 49$	M1	Any unambiguous indication that this linear relationship is being considered (including 'trial and improvement'). FT their $\sqrt{81}$ ($\neq 81$) AND 7^2 ($\neq 7$) for M1 and possibly A1 if at least one correct value used. FT for M1 only if neither correct value used. Award M1 if $49 - 9$ seen.
	(n =) 40	A1	Mark final answer.

15.	Indicates 2 (letters out of 6 gain points)	B1	Any unambiguous indication.
	(Expected number of wins =) $\dfrac{2 \times 24}{6}$ or equivalent	M1	FT 'their stated number of '10 point' letters'.
	$= 8$	A1	Award M1A1 for 8/24 suggesting '8 wins out of 24'
	(Points gained =) 8×10	M1	FT 'their derived 8' × 10 only if 'their derived 8' < 24.
	$= 80$ (points) AND	A1	
	'No' (Leah is not expected score 100 points)		FT their derived number of points

Alternative method 1			
	Indicates 2 (letters out of 6 gain points)	*B1*	*Any unambiguous indication.*
	(Each letter expected to be drawn) $\dfrac{24}{6}$ *(times)*	*M1*	
	= 4 (times)	*A1*	
	(Points gained =) $4 \times 2 \times 10$	*M1*	*FT 'their derived 4' and 'their stated 2'.*
	= 80 (points) AND	*A1*	
	'No' (Leah is not expected score 100 points)		*FT their derived number of points.*

Alternative method 2			
	. Indicates 2 (letters out of 6 gain points)	*B1*	*Any unambiguous indication.*
	(Expected number of wins =) $\dfrac{2 \times 24}{6}$ or equivalent	*M1*	*FT 'their stated number of '10 point' letters'.*
	= 8	*A1*	*Award M1A1 for 8/24 suggesting '8 wins out of 24'*
	(Number of wins required =) $\dfrac{100}{10}$	*M1*	
	= 10 (wins) AND	*A1*	
	'No' (Leah is not expected score 100 points)		*FT their derived number of expected wins.* *Note for Alternative method 2* *If 'number of wins required' is calculated before calculating 'number of expected wins' then the conclusion ('AND') will be attached to the 8 rather than the 10.*

16.	$4x + 5 = 57$ or equivalent	M1	
	$4x = 52$	A1	
	$x = 13$	A1	FT from $4x = k$. Accept $x = k/4$ (but, if on FT k is a multiple of 4, final answer must be given as a whole number.) M1A1A0 for '$x = 52/4$' Mark final answer. Allow (M1)A1A1 for a correct embedded answer BUT only (M1)A1A0 if contradicted by $x \neq 13$.

17.	3, 4, 4, 9 OR 3, 3, 5, 9.	B3	B1 for a range = 6. B1 for a total = 20. B1 for a median = 4. Penalise use of negative or non-integer values −1. FOUR numbers must be shown, otherwise B0.

18.	Use of Distance / Time	M1	Allow M1 even for e.g. 100 / 2·3(0) or 100/150.
	$\dfrac{100}{2·5}$ or equivalent	M1	
	$= 40$ (mph)	A1	C.A.O.