GCSE MARKING SCHEME

AUTUMN 2018

GCSE
MATHEMATICS
UNIT 1 - FOUNDATION TIER
3300U10-1

INTRODUCTION

This marking scheme was used by WJEC for the 2018 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.

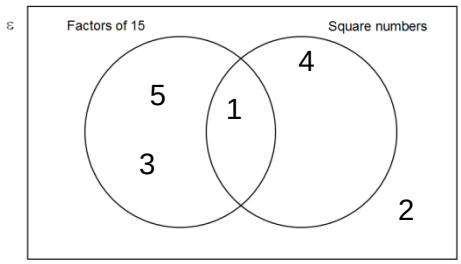
It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conference, teachers may have different views on certain matters of detail or interpretation.

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

WJEC GCSE MATHEMATICS (3300U10-1)

AUTUMN 2018 MARK SCHEME

GCSE MATHEMATICS **Unit 1 : Foundation Tier**	**Mark**	**Comments**
1.(a) 138	B1	
1.(b) 71	B1	
1.(c) 1061	B1	
1.(d)(i**)** × +	B1	
1.(d)(ii) 13	B1	
2.(a) kilometres	B1	
2.(b) kilograms	B1	
3. 42	B2	B1 for an answer of 33, 35, 36, 39, 45, 48 or 49; or any multiple of 21, apart from 42 itself e.g. 21, 63, 84, … OR B1 for a list of multiples of 3 or 7 with at least one correct within the range 30 to 50.
4. Correct plot of (4, 6)	B1	
5. 13 (cm)	B1	Accept 12.8 – 13.2 (cm)
6.(Time journey began=)7(p.m.) – 2(hr)35(min) (=) 4:25 (p.m.) (Time in 24 hour clock =) 16(:)25	M1 A1 B1	Accept unsupported 4:65 or 16(:)65 as evidence of M1 only Accept 4 hours 25 mins. FT 'their 4:25' written in 24-hour clock provided between 1 p.m. and midnight inclusive. Condone 16(:)25 p.m. for B1. (Penalised with W0)
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.
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.

7.(a) 3·12 (m)	B1	
7.(b) 9070 (m)	B1	
8.(a) 3	B1	
8.(b)(i) A	B1	A should be between 1/2 and 3/4 exclusive. B0 if no labels.
8.(b)(ii) B (A)	B1	B should be between 1/8 and 3/8 exclusive. Award B1 if no labels and both marks are positioned correctly. [A should be between 1/2 and 3/4 exclusive.]
9.(a) 3.6	B1	
9.(b) 25.9	B1	
10. (£) 0·15 × 600 oe OR 320 ÷ 4 OR 80 (Larger amount is £) 90 AND sight of (£)80	M1 A2	Accept 15/100 × 600 but not 15% × 600 unless correctly evaluated A1 for sight of (£)90. Accept '15% of £600' on answer line, provided (£)90 seen.
11. Sight of 60(°) or 90(°) 180(°) – [60(°) + 90(°)] OR 90(°) – 60(°) 30(°)	 B1 M1 A1	Answers may be seen on the diagram. Not as final answer for x or incorrectly labelled on diagram. FT 'their derived 60(°) or 90(°)' if B1 awarded CAO Answer of x = 30(°) with no working gets 3 marks.
12. 	B2	B2 for all fully correct. Award B1 for three or four correct. *Any duplicates are marked as incorrect.* *Ignore any numbers other than 1-5.*
13. 3 2	B2	B1 for each

14.(a) 8x − 6y or 2(4x – 3y)	B2	Must be in an expression for B2. B1 for sight of (+)8x or −6y. B1 for 8x + −6y Mark final answer.
14.(b) 2m = 19 m = 9½ or 19/2 or 9·5	B1 B1	 FT from 2m = k. Accept m = k/2 (but, if on FT k is even, final answer must be given as a whole number.) B0 for '9 rem 1'. Mark final answer. Allow 2 marks for embedded answer BUT only 1 mark if contradicted by m ≠ 9½.
14.(c) 1	B2	B1 for sight of −20 or sight of (+) 21. But not – 20f (+) 21g. Mark final answer.
15.(a) Correct scale drawing BAC = 55° AB = 6cm AND AC = 8cm AND triangle drawn	 B1 B2	Allow tolerance of ±2mm and ±2°. Labelling need not be shown if vertices can be unambiguously identified. B1 for AB = 6cm OR AC = 8cm.
15.(b) Length of 'their BC' × 3 = 20·1	 M1 A1	Allow tolerance of ±2mm for 'their BC'. FT from 'their BC'. ISW if correct evaluation <u>seen</u> (eg 20·1 rounded to 20) If <u>no attempt</u> at 15(a) then allow SC1 for an answer between 10·2 and 11·4 inclusive.
16. x + 7 + 8 = 18 or equivalent. x = 3 (Area =) 6 × (3 + 2) = 30(cm^2)	M1 A1 M1 A1	 May be seen on the diagram OR implied by 3 + 7 + 8 (= 18) for M1 A1. F.T. 'their derived or stated value for x'.
17.(a) <u>60 × 300</u> OR <u>59 × 300</u> OR <u>60 × 301</u> 2000 2000 2000 = 9 = 8·85 or 8·9 or 9 = 9·03 or 9	M1 A1	Must be seen. M0 for exact calculation. Do not accept any other approximated values. Unsupported answer is M0A0.
17.(b)(i) 19·437	B1	
17.(b)(ii) 34·1	B1	Allow 34.10

18. Recognising that each number has a one in five chance of being chosen. (Expected number of even numbers =) $\frac{2}{5} \times 75$ $= 30$	B1 M1 A1	May be expressed in words e.g. ' 2 (even) numbers out of 5', ' each number has a one in 5 chance' OR as a probability e.g. sight of 2/5, '(probability of choosing each ball =) 1/5' B0 if no reference to 'out of 5' or 'in 5'. M1 for $1/5 \times 75 \times 2$ or equivalent. M1 implies the B1. 30/75 gains B1 M1 A0 if 30 on its own is not shown.
19.(a) 214°	B1	
19.(b) (i) A	B1	
19.(b) (ii) E	B1	
20. (−3, 5)	B1	
21.(a) a = 52° b = 52° c = 64°	B1 B1 B1	 OR F.T. b = 'their a'.
21.(b) x = 64° y = 64° Isosceles	B1 B1 B1	OR F.T. x = 'their c'. OR F.T. y = 180 – 52 – 'their x'. OR F.T. y = 180 – 64 – 'their a' OR F.T. y = 180 – 'their a' – 'their c' OR F.T. y = 180 – 'their b' – 'their c' CAO Dependent on values given to both x and y AND two equal angles in triangle LMN AND x + y = 128.