



GCSE MARKING SCHEME

SUMMER 2018

**GCSE
MATHEMATICS – COMPONENT 2 (FOUNDATION TIER)
C300U20-1**

INTRODUCTION

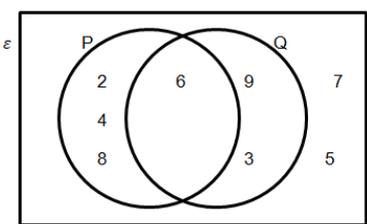
This marking scheme was used by WJEC for the 2018 examination. It was finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conference was held shortly after the paper was taken so that reference could be made to the full range of candidates' 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.

Eduqas Summer 2018 C2 Foundation Tier	Mark	Comment
1. 25 (£) 106.4(0) (£)1.21 (£) 138.62	B1 B1 B1 B1 (4)	FT 'their £106.40'
2. A = 9 (kg) B = 19.5 (kg) (A + B =) 28.5 (kg)	B1 B1 B1 (3)	Full marks will be awarded for unsupported answer of 28.5 (kg) in the answer space. FT 'their 9' + 'their 19.5'.
3. (a) Completes the table e.g. A (8 1) B 7 2 C 6 3 D 5 4	B2	Entries may be in a different order but the pairs must be correct (add up to 9). Award B1 for 2 correct pairs. Allow B1 for length and width in wrong order.
3. (b) identifies the 5 x 4 rectangle AND area is 20 (cm ²) with at least one other area correct.	B2 (4)	FT 'their greatest area' or associated letter, provided at least B1 awarded in (a). e.g. Area A = 8 (cm ²) Area B = 14 (cm ²) Area C = 18 (cm ²) Award B1 for identifying the correct rectangle or for sight of two correct areas
4. (a) 26 x 7.5 or 13 x 15 (195) or 13 x ¼ or 26/8 or equivalent 3 (hours) 15 (minutes)	M1 A1	May be seen in stages. An answer of 3.25 would imply M1.
4. (b) Assumption, e.g. 'each shirt takes the same time to iron', 'all shirts same size/type/etc' or 'doesn't take a break' or equivalent.	E1	
4. (c) Impact e.g. 'the time would change' or equivalent.	E1 (4)	Note that the time could increase or decrease. The impact must match the assumption. Acceptable responses include: 'It could increase the time taken' 'It could decrease the time taken' 'The time could increase or decrease' 'The time would increase or decrease' The word 'time' may not be seen.
5. (a) 13 and 17 30	B1 B1	FT 'their 13' + 'their 17' provided that one of the numbers is prime.
5. (b) 75 and 25 1875	B1 B1 (4)	FT 'their 75 x their 25' correctly evaluated. Numbers from the list.

6. (a) equilateral (triangle)	B1	
6. (b) 18×6 or equivalent = 108(cm)	M1 A1	Check the diagram.
6. (c) $\frac{1}{30}$	B1 (4)	
7. (a) $23a$	B1	
7. (b) Sight of $(2a +) 27b$ and states or implies 'no'.	B2 (3)	B1 for 'No' and a partially correct reason e.g. $2a + kb$ where k is not -3 . This includes '-27b'
8.(a) Convincing working e.g. $1\frac{1}{2}lb = 16 + 8 = 24$ oz $24 \times 28 = 672$ (g)	B2	Award B1 for sight of 24 or for 'their $16 + 8$ ' x 28. The method could be seen in reverse, starting with 672(g) and ending with 1.5(lb).
8.(b) $672 \div 6 \times 8$ or equivalent = 896 (g)	M1 A1	M1 for a correct imperial answer (2lb or 32oz) May be seen in stages.
8.(c) $728 \div 28$ (= 26oz) $26 \div 13 \times 6$ = 12 (people)	M1 M1 A1 (7)	Or equivalent. FT 'their 26' FT 'their 26' <i>Alternative method: 13×28 (= 364) M1</i> <i>$728 \div 364 \times 6$ or 2×6 M1</i> <i>=12 A1</i>
9. (a) 2016	B1	
9. (b) 7:6	B2	B1 for 63:54 Or B1 for 'their 63:54' correctly simplified. SC1 for an answer of 6:7
9. (c) 41×2500 or 54×2150 $54 \times 2150 - 41 \times 2500$ Or $41 \times 2500 - 54 \times 2150$ 13600 (p) or (£)136 (£)136 AND spent more in 2015	M1 M1 A1 A1	Accept equivalent work in £ FT 'their 41' and 'their 54' provided that one is correct Digits '136' implies M2, for example 1.36 CAO. Allow -13600(p) or -(£)136 FT 'their 136' Do not accept place value errors
9. (d) 0.2×50 (p) + 50 or equivalent = 60(p)	M1 A1 (9)	Or equivalent full method.
10.(a) $104/100 \times 1240$ = 1289.6	M1 A1	Or equivalent full method.
10.(b) '=' written in the box AND sight of 16.8 or $35 \times 48 \div 100$ or equivalent.	B2	B1 for sight of 16.8 or $35 \times 48 \div 100$ or equivalent with incorrect sign or missing sign.
10.(c) $(100 \times) 19 \div 24$ (= 0.79166...) OR 0.75×24 (= 18) Seren (did better) with sight of either (0.)79(166...) or 18 as appropriate	M1 A1 (6)	

15. (a) $30 \div 2$ = 15 (km/h)	M1 A1	
15. (b) Valid description, e.g. 'stopped' or equivalent	E1	
15. (c) (i) Between 11:30 and 12:00 (ii) Explain e.g. 'the line is steepest'	B1 E1	
15. (d) Joining (12:00,50) to (13:00,60) Joining (13:00,60) to (14:00, 90)	B1 B1 (7)	This section may be a straight line or curved. FT 'their first line' If no marks, award SC1 for (12:00,50) to (13:00,40) to (14:00, 10)
16. Unambiguously matches the graphs to the equations. Graph 2 $y = x + 1$ Graph 3 $y = 1 - x^2$ Graph 4 $y = 1 - x$ Graph 5 $y = x^2 - 1$	B2 (2)	Award B1 for 2 or 3 correct unambiguously matched graphs.
17.(a) indicates 12.5×10^7 , 12000000 AND 7 million	B1	
17.(b) 1.3×10^5	B2 (3)	Award B1 for 1.3×10^0 or 130000 or $A \times 10^5$ or 13×10^4 .
18.(a) 	B2	Award B1 for identifying 2,3,5,6 AND placing two or three numbers correctly.
18.(b) $\frac{2}{8}$ or equivalent	B2 (4)	ISW B1 for $\frac{2}{n}$ or $\frac{m}{8}$ in a fraction < 1 or '2 out of 8' or '2 in 8' FT their Venn diagram.

19*. (a) Indicates or implies 'No' or 'Don't know' with a reason, e.g. 'No, not all scores are equally likely', 'Don't know, as not enough throws to tell', 'No as it shows fewer 2s and 5s', 'No, high numbers of 1 and 6', 'No, appears to be biased towards 1 and 6'	E1	Accept, e.g. 'No, should have equal amounts for each number', Allow, e.g. 'Don't know, dice are random so there could be variety in results', 'No, if fair all would be 1/6'
19*. (b) $\frac{11}{120}$	B2	B1 for $11/\dots$ or $\frac{4+5+2}{40+40+40}$
19*. (c) $\frac{37}{120} (\times 480)$ 148	M1 A1 (5)	Accept for 'their $4+5+4+8+8+8$ ' ($\times 480$) 'their $40+40+40$ ' CAO A final answer of 148/480 is M1, A0
20*. (a) $(a-2)(a+7)$	B2	B1 for $(a \dots 2)(a \dots 7)$
20*. (b) $(b+5)(b-5)$	B1	CAO
20*. (c) $d/5 = 12 - 2$ or $d/5 = 10$ or $d + 2 \times 5 = 12 \times 5$ $d = 50$	M1 A1 (5)	CAO. Accept embedded answers Mark final answer <i>If no marks award SC1 for an answer of $d = 70$ from $d/5 = 12 + 2$</i>
21*. $(65 + 14 + 9) \times 27 \div 9$ ($=88 \times 3$) 264 (kg) Conclusion that it is not possible as $264 > 250$, e.g. 'No as 264kg is greater than $\frac{1}{4}$ tonne'	M1 A1 E1 (3)	FT provided M1 awarded for an appropriate conclusion. Do not accept $\frac{1}{4}$ tonne as any amount other than correctly giving 250 kg, however it is not essential to state this conversion.
22*. (a) Midpoints 10, 30, 50, 70, 90 $1 \times 10 + 8 \times 30 + 9 \times 50 + 7 \times 70 + 6 \times 90$ $\div 31$ 55.8(...cm)	B1 M1 m1 A1	FT 'their midpoints' provided these are at the bounds or within the groups $(10 + 240 + 450 + 490 + 540 = 1730)$ Accept 56(cm) from correct working
22*. (b) Argument presented to include that (some) other groups could have snowfall towards the lower end of the group, e.g. 'group 20 to 40 (cm) may have actual snowfall between 21 and 23 cm'	E1 (5)	Accept 'the mean changes by about 2(.3 cm), so still about the same' Allow, e.g. 'Would not impact on the mean much' Do not allow an argument presented saying 'do not know the actual snowfall for the other groups' Do not accept an argument based on the reason for using midpoints without further clarification

