



GCSE MARKING SCHEME

SUMMER 2018

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

INTRODUCTION

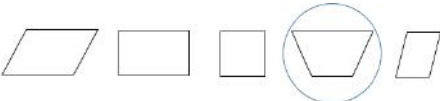

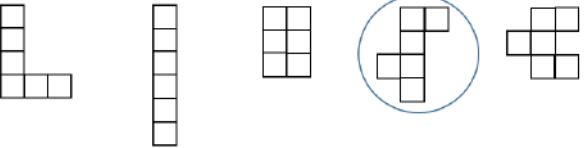
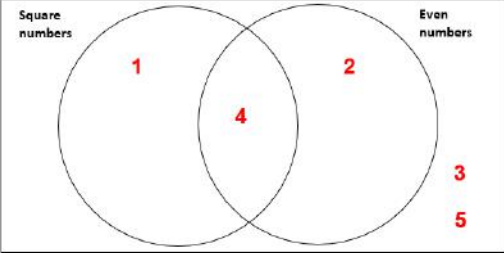
This marking scheme was used by WJEC for the 2018 examination. It was finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conference was held shortly after the paper was taken so that reference could be made to the full range of candidates'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

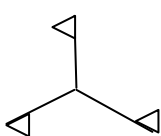
It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conference, teachers may have different views on certain matters of detail or interpretation.

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

WJEC GCSE MATHEMATICS (NEW)

SUMMER 2018 MARK SCHEME

GCSE Mathematics Unit 2: Foundation Tier Summer 2018	Mark	Comments
1. 4.15 4.67 3.22 39	B1 B1 B1 B1	Condone spurious units.
2.(a) 2450	B1	
2.(b) 9 999	B1	
3. (£)35 ÷ (£)2.8(0) 12 (books) Organisation and Communication. Accuracy of writing.	M1 A1 OC1 W1	M1 A0 for a final answer of 12.5. For OC1, candidates will be expected to: <ul style="list-style-type: none"> • 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 For W1, candidates will be expected to: <ul style="list-style-type: none"> • 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
4.(a) 	B1	
4.(b) 	B1	
4.(c) 	B1	
5. 	B2	B2 for all fully correct Award B1 for 3 or 4 correct Any duplicates are marked as incorrect.

6.(a)(i) Add 5 (to the previous term)	B1	Accept +5, goes up in 5.
6.(a)(ii) Multiply (the previous term) by 2	B1	Accept $\times 2$, times 2, double.
6.(b) 1(.0)	B1	
7.(a) 6.76 or equivalent	B1	Accept $6\frac{19}{25}$ and $\frac{169}{25}$. Ignore <u>subsequent</u> rounding.
7.(b) 4.6 or equivalent	B1	Accept $4\frac{3}{5}$ and $\frac{23}{5}$. Ignore <u>subsequent</u> rounding.
8.(a) 180 ($^{\circ}$)	B1	Check diagram. Answer line takes precedence.
8.(b) (y=) $180 - 29 - 96$ or $360 - 180 - 29 - 96$ $= 55 (^{\circ})$	M1 A1	FT their 180 from (a) C.A.O.
9. $(17 - 3) = 14$ $(14 \div 5) = 2.8$	B1 B1	Accept embedded (unsupported) answers e.g. $14 + 3 = 17$ $2.8 \times 5 = 14$. FT their derived 14. Accept $\frac{14}{5}$ or $2\frac{4}{5}$ or equivalent. To be awarded the second B mark, candidates must provide their exact (unrounded) answer.
10.(a) $\frac{4}{5} \times 134$ or equivalent $= 107.2$ or $107\frac{1}{5}$ ISW	M1 A1	M1 for $134 - (134 \div 5)$ M1 A0 for $536 \div 5$
10.(b) $0.3(0) \times 275$ or equivalent $= 82.5$ ISW	M1 A1	Award SC1 for an unsupported answer of 82 or 83.
11. 2, 5, 7, 7 in any order.	B3	B2 for satisfying 2 of the 3 conditions B1 for satisfying 1 of the 3 conditions Conditions to check: Mode 7, Range 5, Median 6 There must be 4 numbers written otherwise B0.
12.(a) 28	B1	Mark final answer. Allow embedded answer. B1 for $28/4$ or $28/4 = 7$ with <u>no</u> further work. B0 for $28/4$ followed by ' $x \neq 28$ '.
12.(b) $4f + 3g$	B2	Must be in an expression for B2. B1 for sight of (+)4f OR B1 for sight of (+)3g. Mark final answer.
12.(c) $5 \times 4 + 2q = 24.6$ or equivalent. $2q = 4.6$ $(q =) 2.3$	M1 A1 A1	Implies M1. FT only from $2q = k$. Mark final answer. Allow 3 marks for embedded answer BUT Only two marks if contradicted by ' $q \neq 2.3$ '. If <u>no marks gained</u> , allow SC1 for sight of 20 (not 20p) <u>from</u> 5×4 OR allow SC1 for $q = 22.3$
13.(a) Two dots placed at suitable points to ensure rotational order 2.	B1	Mark correct intention. B0 if extra dots offered.
13.(b) Three dots placed at suitable points to ensure rotational order 3.	B1	Mark correct intention. B0 if extra dots offered.
13.(c) 	B1	

<p>18. (Volume A =) $5 \times 5 \times 5$ (cm³) OR (Volume B =) $4 \times 4 \times 5$ (cm³)</p> <p>AND (Volume A =) 125 (cm³) (Volume B =) 80 (cm³)</p> <p>(Volume of B as a percentage of the volume of A) $= \frac{80}{125} (\times 100\%)$ $= 64(\%)$</p>	<p>M1</p> <p>A1</p> <p>M1</p> <p>A1</p>	<p>For use of Vol = l x b x h with <u>either</u> A or B.</p> <p>C.A.O. for <u>both</u> volumes. One correct implies previous M1.</p> <p>F.T. their derived volumes.</p> <p>An answer of 64(%) gains all four marks.</p> <p><i>Allow marks if they work with base areas (as heights are equal).</i></p>
<p><i>Alternative method</i> (Where 125 cm³ and 80 cm³ not shown.) $5 \times 5 \times 5$ (cm³) OR $4 \times 4 \times 5$ (cm³) $\frac{4 \times 4 \times 5 (\times 100\%)}{5 \times 5 \times 5}$ $= 64(\%)$</p>	<p>M1</p> <p>M2</p> <p>A1</p>	
<p>19. $3(4x - 7) = 27$ or equivalent $4x = 16$ or $12x = 48$ or equivalent $x = 4$</p>	<p>M1</p> <p>A1</p> <p>A1</p>	<p>M1 for $4x - 7 = 27/3$</p> <p>FT from $ax = b$. Allow 3 marks for embedded answer BUT Only two marks if contradicted by '$x \neq 4$'.</p> <p>Unsupported answer of $x = 4$ gains all three marks. If no marks gained allow SC1 for sight of 9.</p>
<p>20.(a) $1 - 0.36 - 0.12 - 0.24$ $= 0.28$</p>	<p>M1</p> <p>A1</p>	
<p>20.(b) $522 \times \frac{1}{3}$ or equivalent (e.g. $522 \div 0.36 \times 0.12$) $= 174$</p>	<p>M1</p> <p>A1</p>	