



GCSE MARKING SCHEME

SUMMER 2023

**GCSE
MATHEMATICS – NUMERACY
UNIT 2 – FOUNDATION TIER
3310U20-1**

INTRODUCTION

This marking scheme was used by WJEC for the 2023 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 - NUMERACY

SUMMER 2023 MARK SCHEME

Unit 2: Foundation Tier	Mark	Comments
1(a) 127 miles	B1	
1 (b) Identification of the 4 correct distances needed: 160, 69, 92, 42 160 + 69 + 92 + 42 363 (miles)	B1 M1 A1	May be seen in the bullet list or in the table (only 4 values to be explicitly identified for B1) May be implied in later working e.g. a total of 726 implies adding the 4 correct values twice. FT the sum of 4 distances provided at least 3 correct For example: Award B0M1A1 for: 160 + 125 + 92 + 42 = 419 If no marks awarded, award SC1 for: 3 (out of the 4) correct values added and evaluated correctly eg (69 + 92 + 42 =) 203 4 values, with only 2 being correct distances, added and evaluated correctly eg (127 + 125 + 92 + 42 =) 386 5 values, with the 4 correct values, added and evaluated correctly Award SC0 for answer of 615 from all 6 distances added
1 (c) (Snowdon =) 4 (hours) 30 (mins) or 4 ½ (hours) or 270 (minutes) (Cader Idris =) 5 (hours) 20 (mins) or 320 (minutes) (Pen y Fan =) 2 (hours) 15 (mins) or 135 (minutes) (Total time =) 4 (hours) 30 (mins)+5 (hours) 20 (mins)+2 (hours) 15 (mins) or equivalent (Total time =) 12 (hours) 5 (mins)	B1 B1 B1 M1 A1	Allow incorrect notation but penalise in OCW Allow 4:30 or 4.3(0) Allow 5:20 or 5.2(0) Allow 2:15 or 2.15 Award M1 for adding 'their' 3 times even if there is a mix of units and/or notation. FT 'their 4 (hours) 30 (mins) ' + 'their 5 (hours) 20 (mins)' + 'their 2 (hours) 15 (mins)' or equivalent FT 'their total time' correctly evaluated and converted into hours and minutes Award A1 for 12:05 or 12.05 but A0 for 12:5 or 12.5 Award A0 for an answer of 11 (hours) 65 (mins) Note: 4 hours 30mins + 5 hours 20 mins + 2 hours 55 mins = 12 hours 5 mins is awarded B1B1B0M1A0
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 explanations and working in a way that is clear and logical - write a conclusion that draws together their results and explains what their answer means
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.

1 (d) Sight of 10.05 (km)					B1	May be implied in later working								
31.05 – 14.6 – 10.05 or 31.05 – (14.6 + 10.05) or 31.05 – 24.65					M1	FT ‘their 10.05’ for M1 including 10 050								
6.4 (km)					A1	FT 31.05 – 14.6 – ‘their 10.05’ correctly evaluated and given in km. For A1, do not FT use of 10050(m) or a value that leads to a negative answer Note- use of 10.5 instead of 10.05: 31.05 – (14.6 + 10.5) or 31.05 – 25.1 = 5.95 is awarded B0M1A1								
Alternative method: Sight of 31 050 (m) AND 14 600 (m)					B1	May be implied in later working								
31 050 – 14 600 – 10 050 or equivalent					M1	FT ‘their 31 050’ and ‘their 14 600’ for M1 including 31.05 and 14.6								
6.4 (km)					A1	FT ‘their 31 050’ and ‘their 14 600’ correctly evaluated AND the answer given in km								
1 (e) 540+1452+53+28+280+350+300+500+340 (=(£)3843)					M1	Attempt to add all the values. Allow a total in the range of 3303 to 4383 as evidence of adding Allow one omission or one repeated value								
÷ 9					m1	FT ‘their 3843’ Award M1 m1 A0 for 540+1452+53+28+280+350+300+500+340 ÷ 9 (=3540.77...)								
(£)427 (this is more than £400)					A1	CAO								
Alternative method: 540+1452+53+28+280+350+300+500+340 (=(£)3843)					M1	Attempt to add all the values. Allow a total in the range of 3303 and 4383 as evidence of adding Allow one omission or one repeated value								
400 × 9 (= £)3600)					M1									
(£)3843 is more than (£)3600					A1	CAO								
2.(a) 5.9 + 1.9 + 5.9 + 1.9 or equivalent 15.6 (m)					M1 A1	If no marks awarded, award SC1 for 10.6(m) (correctly evaluated perimeter of the base of small kennel)								
2 (b)					B3	B3 for all correct kennels B2 for 3 or 4 correct kennels B1 for 1 or 2 correct kennels								
<table><tr><td>Kennel 1 Small Kennel</td><td>Kennel 2 Small Kennel (Annie)</td><td>Kennel 3 Small Kennel Sirius</td><td>Kennel 4 Small Kennel Finbar</td></tr><tr><td>Kennel 5 Large Kennel Howard and Eric</td><td>Kennel 6 Large Kennel Poppy and Chester</td><td>Kennel 7 Large Kennel</td><td>Kennel 8 Large Kennel Macs and Tili</td></tr></table>					Kennel 1 Small Kennel	Kennel 2 Small Kennel (Annie)	Kennel 3 Small Kennel Sirius	Kennel 4 Small Kennel Finbar	Kennel 5 Large Kennel Howard and Eric	Kennel 6 Large Kennel Poppy and Chester	Kennel 7 Large Kennel	Kennel 8 Large Kennel Macs and Tili		
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3. (Student Loan repayment =) $0.04 \times 27\,000$ or equivalent (£)1080 (Pension Scheme contribution =) $27\,000 \div 20$ or $0.05 \times 27\,000$ or equivalent (£)1350 (Total =) (£)7535 ISW	M1 A1 M1 A1 B1	Answer space takes precedence Award M1 for a full correct method that would lead to a correct answer of 1080 e.g. $1\% = 270$, $4\% = 4 \times 270$ If M0A0 awarded for the student loan, award SC1 for: • $(5105 - 0.04 \times 27\,000 =) 4025$ • $(0.04 \times (27\,000 - 5105) =) 875(.80)$ or 876 • $(0.04 \times 5105 =) 204(.20)$ • $(5105 - 0.04 \times 5105 =) 4900(.80)$ or 4901 • $(27\,000 - 0.04 \times 27\,000 =) 25920$ If M0A0 awarded for the pension scheme contribution, award SC1 for: • $(1080 \div 20 = £) 54$ • 'their 1080' $\div 20$ correctly evaluated rounded or truncated e.g. $(875.8 \div 20 =) 43(.79)$ or 44 • $((27\,000 - 1080) \div 20 =) 1296$ • $((27\,000 - 5105) \div 20 =) 1094(.75)$ or 1095 • $(5105 \div 20 =) 255(.25)$ • $(27\,000 - 27\,000 \div 20 =) 25650$ • $((27\,000 - 5105 - 1080) \div 20 =) 1040(.75)$ or 1041 FT (£)5105 + 'their 1080' + 'their 1350' correctly evaluated provided 1 mark previously awarded Sight of a total of (£)2430 implies M1A1 M1A1 B0 (from 1080 + 1350) Unsupported (£)19 465 implies (£)27000 - (£)7535 Award M1A1 M1A1 B0
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6(a)(ii) $72(.00) \div 60$ or $60 \times 120 = 7200$ or $60 \times 1.2 = 72$ or $6 \times 12 = 72$ or equivalent or 120(p) (per minute) or (£)1.2(0) (per minute) Landline, Band C	M1 A2	<u>Working must be shown to support choice of boxes</u> Allow M1 for Landline and C selected with working for Band A (£)18 or 1800(p) and Band B (£)36 or 3600(p) Both boxes must be indicated A1 for explicit sight of 120(p) or (£)1.2(0) (per minute) (not embedded) If no marks, award SC1 for boxes Landline and Band C indicated
6(b) (Cost in £) $2151.3(0) \div 143.42$ (£) 15 (Length of call) $15 \div (0.)3(0)$ or $1500 \div 30$ or $50 \times (0.)30 = 15(.)00$ or equivalent 50 (minutes)	M1 A1 m1 A1	Answer space takes precedence, if blank may be implied in further working Allow from a trial and improvement method Allow a place value error in intended division, e.g. $15 \div 3$ FT 'their $2151.3(0) \div 143.42$' CAO with no incorrect working seen Answer space takes precedence If answers are reversed ((£)50 and 15 (minutes)), award M1 A0 m1 A1 (not from incorrect working)

