



GCSE MARKING SCHEME

JANUARY 2016

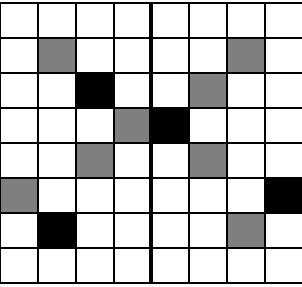
**MATHEMATICS UNITISED - UNIT 2
FOUNDATION TIER
4352/01**

INTRODUCTION

This marking scheme was used by WJEC for the 2016 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.

2016 January Unit 2 (non calculator) Foundation Tier	Marks	Mark Scheme Comments
5.(a) 9m (b) (i) (x=) 8 (ii) (x=) 73	B1 B1 B1 3	Accept embedded answers in (b)
6. 	B2 2	B1 for all 4 correct squares and no more than 2 extra squares OR B1 for 3 correct squares and no more than 1 incorrect squares OR B1 for 2 correct squares and no incorrect squares
7. 300×9.5 2850 2.85(0) (kg)	M1 A1 B1 3	FT 'their derived 2850'
8. (a) (0)·3 oe (b) (0)·068 (c) 3800 (d) (0)·4 (e) 1/100 (f) $0.35 \times (\text{£})400$ or equivalent (= 140) (£)400 – 0.35×400 (£)260	B1 B1 B1 B1 B1 M1 M1 A1 8	Correct method for finding 35% of 400 Full, correct method. $0.65 \times (\text{£})400$ earns M1M1 CAO
9. (a) $\begin{matrix} 14 & 11 & 8 \\ 17 & 13 & 9 \\ 35 & 25 & 15 \end{matrix}$ (b) 2/9	B2 B2 4	B1 for at least 4 correct entries FT their table. B1 for a numerator of 2 in a fraction less than 1. B1 for a denominator of 9 in a fraction less than 1. Do not penalise incorrect reduction of fractions from a FT. NB Penalise –1 for use of words such as '2 out of 9', '2 in 9'. or '2:9'. When both fraction and wrong notation seen, DO NOT penalise wrong notation.
10. (x=) $360(^{\circ}) \div 3$ 120 (^{\circ})	M1 A1 2	Alternative method: e.g. $(6 - 2) \times 180/6$ M1 120 (^{\circ}) A1
11. $4/9 \times 450$ 200 $200 \times (\text{£}) 1.75$ (£) 350	M1 A1 M1 A1 4	FT 'their 200'

2016 January Unit 2 (non calculator) Foundation Tier	Marks	Mark Scheme Comments
12. $4x - 6 = 1$ $4x = 7$ $(x =) 7/4$ or $1 \frac{3}{4}$ or 1.75	B1 B1 B1 3	FT until 2 nd error. Mark final answer. <i>Alternative solution:</i> $2x - 3 = \frac{1}{2}$ B1 $2x = 3.5$ B1 $(x =) 7/4$ or $1 \frac{3}{4}$ or 1.75 B1
13. $3x + 8 + 4x - 2 + 90 = 180$ or equivalent $7x = 84$ OR $7x + 96 = 180$ OR $7x + 6 = 90$ $x = 12(^{\circ})$ $(4 \times 12 - 2 =) 46(^{\circ})$ $(y = 180^{\circ} - 46^{\circ} =) 134(^{\circ})$	M1 A1 A1 B1 B1 5	<i>Check diagram</i> CAO FT 'their $ax = b$ ', $a \neq 1$ <i>Alternative method (for first 3 marks), using trial and improvement to equate the sum of the base angles to 90:</i> 2 appropriate trials M1 <i>Trials of 11 and 13 or trials of 11 and 12 or trials of 12 and 13</i> A1 $x = 12(^{\circ})$ A1 Unsupported $x = 12(^{\circ})$ gains 3 marks FT 'their x ' (provided $x < 23(^{\circ})$) FT 'their 46° ' <i>Alternative (for final 2 marks):</i> $(y =) 3 \times 12 + 8 + 90$ B1 $(=) 134(^{\circ})$ B1 Unsupported $x = 12(^{\circ})$ AND $y = 134(^{\circ})$ gains 5 marks
14. (a) - 1 (b) At least 5 correct plots All 7 points correctly plotted and joined with curve (c) Line drawn correctly Both x-coordinates	B1 P1 C1 P1 B1 5	Plots should be accurate to within one small square FT 'their table'. C0 for a polygon Strict FT 'their curve' for 2 points of intersection B1 does NOT imply P1 $(x = -0.4$ and $x = 4.4)$
15. (a) Method that produces at least 2 correct prime factors Sight of correct factors (2, 5, 5, 7) in any order $2 \times 5^2 \times 7$ (b) Valid explanation e.g. not all powers are even	M1 A1 B1 B1 4	FT until 2 nd error Ignore 1s seen FT their factors (with at least 1 index >1 used). Do not ignore 1s within the product. B0 for a sum or list. Accept any order, provided indices are correctly used.