# шјес <br> cbac 

## GCSE MARKING SCHEME

AUTUMN 2016

## MATHEMATICS - NUMERACY (NEW) UNIT 1 - FOUNDATION TIER <br> 3310U10-1

## 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.


\begin{tabular}{|c|c|c|}
\hline GCSE Mathematics - Numeracy Unit 1: Foundation Tier Autumn 2016 \& Mark \& Comment \\
\hline \begin{tabular}{l}
3. (Total number of people \(=\) ) \(3 \times 6+2 \times 10\) 38 seen or implied \\
(Cost of tables \(=3 \times 3+2 \times 4=)(£) 17\) \\
(Cost of chairs \(=38 \times 2=\) ) (£)76 \\
(Cost of buffet meal \(38 \times 9=\) ) (£)342 \\
(Total cost ) (£)435
\end{tabular} \& \begin{tabular}{l}
M1 \\
A1 \\
B1 \\
B1 \\
B1 \\
B1
\end{tabular} \& \begin{tabular}{l}
38 may be embedded in other working \\
eg in \(38 \times 9\) \\
Seen or implied by \((£) 9+(£) 8\) in final addition \\
FT 'their derived 38' \\
FT 'their derived 38' \\
FT 'their 17 ' + 'their 76 ' + 'their 342 ' \\
Alternative method
\end{tabular} \\
\hline \begin{tabular}{l}
Organisation and communication \\
Accuracy of writing
\end{tabular} \& OC1

W1 \& | 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 |
| 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. | <br>

\hline $$
\begin{aligned}
& 4 \text { (a) } 30+30+15+15+15+15 \\
& 120 \text { (metres) }
\end{aligned}
$$ \& \[

$$
\begin{gathered}
\hline \text { M1 } \\
\text { A1 }
\end{gathered}
$$

\] \& | Ignore incorrect units |
| :--- |
| Award SC1 for an answer of 90(m) from a method of $15 \times 2+30 \times 2$ |
| OR award SC1 for an answer of 105(m) from a method of $15 \times 3+30 \times 2$ | <br>

\hline 4(b) Answer in the range 8.6(m) to 9.4(m) inclusive \& B2 \& Award B1 for $A B 4.5(\mathrm{~cm}) \pm 2 \mathrm{~mm}$ OR award B1 for $2 \times$ 'their $A B$ ' where $A B$ is not in the range 4.3 to 4.7 inclusive. OR award B1 for an answer of 8(m) or $10(\mathrm{~m})$ <br>

\hline | 4(c) Total goals scored $4 \times 7$ $28-(9+6+5)$ |
| :--- |
| 8 | \& \[

$$
\begin{aligned}
& \text { M1 } \\
& \text { A1 } \\
& \text { M1 } \\
& \text { A1 }
\end{aligned}
$$
\] \& Accept an embedded answer of 8. <br>

\hline 4(d) 16:07 \& B1 \& <br>
\hline 5(a) 14520 (square yards) \& B1 \& <br>
\hline 5(b) Method, e.g. using readings for 2.5 and 3 acres or $5.5 \times$ reading for 1 acre

$$
26620 \text { (square yards) }
$$ \& M1

A1 \& $$
\begin{aligned}
& \text { e.g. sight of } 12100+14520 \text {, or } 5.5 \times 4840, \\
& 12100+12100+2420, \text { or } \\
& 9680+9680+4840+2420 \text { in working: i.e. sight of } \\
& \text { any calculation that could lead to a correct answer } \\
& \text { FT e.g. } 12100+\text { 'their } 14520 \text { ' } \\
& \text { FT 'their } 14520 \text { ' used correctly }
\end{aligned}
$$ <br>

\hline
\end{tabular}



| GCSE Mathematics - Numeracy <br> Unit 1: Foundation Tier <br> Autumn 2016 | Mark | Comment |
| :--- | :---: | :--- | :--- |


| GCSE Mathematics - Numeracy Unit 1: Foundation Tier Autumn 2016 | Mark | Comment |
| :---: | :---: | :---: |
| 9(a)(i) 44\% | B1 |  |
| 9(a)(ii) 31\% | B1 |  |
| 9(b)(i) Conclusion (stated or implied) and reason, e.g. 'Yes, (as marks of 2 girls and boys are the same, but) marks for 3 boys are better than the marks of the other 3 girls', 'No, as there is insufficient data' | E1 | The conclusion (e.g. yes/no/can't) MUST match the reason given <br> Accept 'no, as she has plotted one score incorrectly' or similar, i.e. accept 'no' if followed by a reasonable explanation <br> Accept 'yes as some boys had higher marks in English', 'Girls marks 10, 20, 33, 50, 70 and boys marks $10,20,35,60,75$ so yes boys do better', 'yes as boys scored (17) more overall than girls', 'yes as the first 2 are the same, but the last ones are higher', 'yes, some boys did better than girls', 'yes, because there are more higher plots towards the end of the graph' <br> Do not accept 'no because 3 out of 5 boys scored a better mark than the girls', 'yes, the boys had higher plots', 'the boys had the highest mark', 'no, as boys marks are close to the girls marks', 'yes, boys had higher marks', 'yes because boys do better in English', 'yes because the highest mark for girls is 70 and boys is 75 ', 'yes because boys had over 70 marks and girls highest mark was 70 ', 'no, both diagrams are similar', 'no, both have positive correlation', 'yes, boys have a greater range' |
| 9(b)(ii) States or implies 'get more results', 'collect more data', 'repeat the test' | E1 | Do not accept 'put the results on one graph', 'compare the mean scores' |
| 9(c) Straight line of best fit for boys, appropriate for trends, with points above and below the lines <br> Approximately 55 marks | B1 B1 | Do not accept a line of best fit through ( 0,0 ) <br> Accept an answer in the range 53 to 57 marks inclusive <br> FT for 'their line of best fit' including a 'curve' (not dot to dot) |


| GCSE Mathematics - Numeracy Unit 1: Foundation Tier Autumn 2016 | Mark | Comment |
| :---: | :---: | :---: |
| 10. <br> (Money in bank account) $100 \times 4+820$ <br> (Money spent) $4 \times £ 250+400 \times 50$ p <br> or $400 \times(£) 3$ or equivalent <br> (Bank balance) (£)20 | M1 | Calculations may be embedded in stages of working (= £1220) $(=£ 1200)$ <br> Place value must be consistent or correct units stated (may be implied in later working), i.e. could lead to $£ 1200$ <br> M1 for sight of $4 \times(£) 250$ and $400 \times 50(p)$ or equivalent <br> OR <br> M1 for either $\ldots \times(£) 250+400 \times 50(\mathrm{p})$ or $4 \times(£) 250+\ldots \times 50(\mathrm{p}) \text { or equivalent }$ <br> CAO. Do not accept an unsupported answer of (£)20 |
| 11. (Time difference) 5 hours 13:00 + 10 hours 30 minutes -5 hours <br> Thursday 18(:)30 or Thursday 6(:)30 p.m. | $\begin{aligned} & \text { B1 } \\ & \text { M1 } \\ & \text { A2 } \end{aligned}$ | FT 'their 5 hours' <br> Allow ‘Thursday 18 (:) 30 p.m.' <br> A1 for $18(:) 30$ or $6(:) 30$ p.m. or 'Thursday $6(:) 30 ’$ <br> Award B1 and SC1 for an answer of 'Friday 04:30' or 'Friday (0)4(:)30 a.m.' <br> Also FT for SC1 for adding 'their 5 hours', i.e. <br> 23:30 + 'their 5 hours' with 'Friday' (unless 'their 5 <br> hours' $<30$ minutes |

