# MARK SCHEME for the May/June 2009 question paper for the guidance of teachers 

## 0607 CAMBRIDGE INTERNATIONAL MATHEMATICS <br> 0607/05 Paper 5 (Core), maximum raw mark 24

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

- CIE will not enter into discussions or correspondence in connection with these mark schemes.

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M marks are given for a correct method.
A marks are given for an accurate answer following a correct method.
B marks are given for a correct statement or step.
D marks are given for a clear and appropriately accurate drawing.
$\mathbf{P}$ marks are given for accurate plotting of points.
E marks are given for correctly explaining or establishing a given result.
C marks are given for clear communication.

## Abbreviations

cao correct answer only
cso correct solution only
ft follow through
oe or equivalent
soi seen or implied
ww without working
www without wrong working

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Syllabus
0607

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| $\begin{array}{\|l\|} \hline \text { Question } \\ \hline 1 \end{array}$ | Answer |  |  |  |  |  | Mark | Notes | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number of discs | Last disc | $\begin{aligned} & \text { Number } \\ & \text { of discs } \end{aligned}$ | Last disc | Number of discs | Last disc | 7 | B7 | 1 for each shaded square |
|  | 2 | 2 | 9 | 2 | 17 | 2 |  |  |  |
|  | 3 | 2 | 10 | 4 | 18 | 4 |  |  |  |
|  | 4 | 4 | 11 | 6 | 19 | 6 |  |  |  |
|  | 5 | 2 | 12 | 8 | 20 | 8 |  |  |  |
|  | 6 | 4 | 13 | 10 |  |  |  |  |  |
|  | 7 | 6 | 14 | 12 |  |  |  |  |  |
|  | 8 | 8 | 15 | 14 |  |  |  |  |  |
|  |  |  | 16 | 16 |  |  |  |  |  |
| 2 | $64,128$ |  |  |  |  |  | 2 | B1 for each |  |
| 3 (a) | 2 |  |  |  |  |  | 1 | B1 |  |
| (b) | 30 |  |  |  |  |  | 1 | B1 |  |
| (c) | 8 |  |  |  |  |  | 2 | B2 <br> OR <br> M1 for 2 (68 - their 64) <br> A1 correct evaluation |  |
| (d) | 126 |  |  |  |  |  | 1 | B1 |  |
| (e) | 144 |  |  |  |  |  | 2 | B2 <br> OR <br> M1 for 2(200 - their 128) or 256-2(256-200) oe A1 correct evaluation | ft with $2 \times$ their 128 for 256 |


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| 4 (a) <br> (b) | $23$ $44$ | 2 2 | B2 <br> OR <br> M1 recognise sequence continues in 2's <br> B2 <br> OR <br> M1 for 24/2 or better |  |
| :---: | :---: | :---: | :---: | :---: |
| $5 \text { (a) }$ <br> (b) (c) | (10) $8,6,4,2,9,5,1,3$ (7) <br> corresponding terms add to 11 <br> 325 | 1 1 1 | B1 <br> B1 <br> B1 | Condone one omission or error <br> Accept a diagram indicating this |
|  |  | 1 | C1 for communication by: Showing strategy Comparing Checking | Award mark for one of: <br> Strategy shown for Question 2 <br> Question 3(c) <br> Question 3(e) <br> Question 4 <br> Indicating comparison of corresponding terms in Question <br> 5(b) <br> Checking a result. |
|  |  |  |  | [Total: 24] |

