

CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the October/November 2015 series

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/21

Paper 2 (Extended), maximum raw mark 40

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 should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

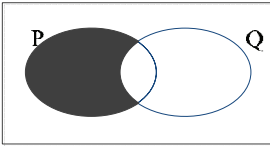
Cambridge is publishing the mark schemes for the October/November 2015 series for most Cambridge IGCSE[®], Cambridge International A and AS Level components and some Cambridge O Level components.

| | | | |
|--------|---|-------------|----------|
| Page 2 | Mark Scheme | Syllabus 11 | Paper 21 |
| | Cambridge IGCSE – October/November 2015 | 0607 | 21 |

Abbreviations

| | |
|------|----------------------------|
| cao | correct answer only |
| dep | dependent |
| FT | follow through after error |
| isw | ignore subsequent working |
| oe | or equivalent |
| SC | Special Case |
| nfww | not from wrong working |
| soi | seen or implied |

| Question | Answer | Mark | Part Marks |
|----------|-----------------------------|-----------------|---|
| 1 | $\frac{1}{4}$ | 2 | M1 for $\frac{7}{12} - \frac{4}{12}$ oe or better e.g. $\frac{3}{12}$ |
| 2 | 43.2 | 2 | M1 for $12 \times 60 \times 60 \div 1000$ oe |
| 3 (a) | 4.8×10^{-5} | 1 | |
| (b) | 1.2×10^{16} | 2 | B1 for correct non standard form answer |
| 4 | 340 | 2 | M1 for $17 \div 0.05$ oe |
| 5 | $2\sqrt{3}$ | 2 | B1 for $5\sqrt{3}$ or $3\sqrt{3}$ or M1 for $\sqrt{25} \times \sqrt{3} - \sqrt{9} \times \sqrt{3}$ |
| 6 (a) | 2 | 1 | |
| (b) | $\frac{v-u}{t}$ oe | 2 | M1 for correctly isolating the term in a M1 for correct division by t |
| 7 | 8 | 3 | M2 for $\sqrt{17^2 - 15^2}$ or better or M1 for $AC^2 + 15^2 = 17^2$ oe or better |
| 8 (a) | 13 | 1 | |
| (b) | 36 | 2 | M1 for 164 seen or indicated |
| 9 (a) | 0.008 or $\frac{1}{125}$ oe | 1 | |
| (b) | 2 | 1 | |
| (c) | 16 | 1 | |
| (d) | $\frac{1}{2}$ or 0.5 | 1 | |
| 10 | $[x =] 50$ $[y =] 130$ | 1 1FT | 180 – their x |

| Question | Answer | Mark | Part Marks |
|----------|--|------------|---|
| 11 | [p =] $\frac{1}{2}$ or 0.5 [q =] 2 | 2 1 | M1 for gradient = $\frac{2}{4}$ oe |
| 12 (a) | 4 | 1 | |
| 12 (b) | U  | 1 | |
| 13 | $y = -\frac{4}{3}x + 7$ oe | 4 | B1 for midpoint (0, 7) M1 for gradient of $AB = \frac{10-4}{4--4}$ or better M1 for gradient = $\frac{-1}{\text{gradient of } AB}$ |
| 14 (a) | [y =] $\frac{9}{\sqrt{x}}$ | 2 | M1 for $\frac{k}{\sqrt{x}}$ oe |
| 14 (b) | 1 | 1FT | Only FT incorrect k |
| 15 | [a =] 3 [b =] 2 | 1 1 | Allow $2k$, k integer $\neq 0$ |