**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

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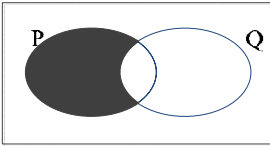® IGCSE is the registered trademark of Cambridge International Examinations.

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**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 | | $\dfrac{1}{4}$ | 2 | **M1** for $\dfrac{7}{12} - \dfrac{4}{12}$ oe or better e.g. $\dfrac{3}{12}$ |
| 2 | | 43.2 | 2 | **M1** for $12 \times 60 \times 60 \div 1000$ oe |
| 3 | (a) | $4.8 \times 10^{-5}$ | 1 | |
| | (b) | $1.2 \times 10^{16}$ | 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 $3\sqrt{3}$ <br> or **M1** for $\sqrt{25} \times \sqrt{3} - \sqrt{9} \times \sqrt{3}$ |
| 6 | (a) | 2 | 1 | |
| | (b) | $\dfrac{v-u}{t}$ oe | 2 | **M1** for correctly isolating the term in $a$ <br> **M1** for correct division by $t$ |
| 7 | | 8 | 3 | **M2** for $\sqrt{17^2 - 15^2}$ or better <br> 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 $\dfrac{1}{125}$ oe | 1 | |
| | (b) | 2 | 1 | |
| | (c) | 16 | 1 | |
| | (d) | $\dfrac{1}{2}$ or 0.5 | 1 | |
| 10 | | [$x =$] 50 | 1 | |
| | | [$y =$] 130 | 1FT | $180 -$ *their x* |

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

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