

**UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS**  
International General Certificate of Secondary Education

**MARK SCHEME for the October/November 2010 question paper  
for the guidance of teachers**

**0607 CAMBRIDGE INTERNATIONAL MATHEMATICS**

**0607/02**

Paper 2 (Extended), maximum raw mark 40

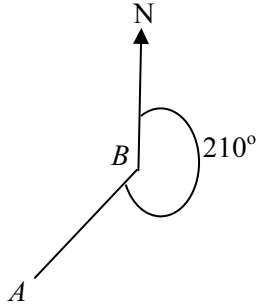
This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began,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

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|        |                                |          |
|--------|--------------------------------|----------|
| Page 2 | Mark Scheme: Teachers' version | Syllabus |
|        | IGCSE – October/November 2010  | 0607     |

|       |   |                        |  |
|-------|---|------------------------|--|
| 1 (a) | $5\sqrt{3}$   | B2                     | Award M1 for evidence of $\sqrt{25 \times 3}$  |
| (b)   | 3   | B1                     | [3]  |
| 2     | $c(2a - 5b) + 3(2a - 5b)$ or<br>$2a(c + 3) - 5b(c + 3)$<br><br>$(2a - 5b)(c + 3)$<br><br>www2   | M1<br><br>A1           | [2]  |
| 3     | $\frac{a-1}{6-2} = \frac{3}{2}$ oe For correctly setting out the gradient<br><br>$2a - 2 = 12$ For a correct method to eliminate the fractions from a correct equation<br><br>$a = 7$<br><br>www3 | M1<br><br>M1<br><br>A1 | <u>Alternative solution</u><br>$y = \frac{3}{2}x - 2$<br><br>$a = \frac{3}{2} \times 6 - 2$ For substituting $a$ and 6 correctly<br><br>$a = 7$<br><br>[3] |
| 4 (a) | 45  | B1                     | If B0 award B1 for 30 or 55 seen and not spoiled by use of 150 and/or 50<br><br>If B0 award B1 for 128 to 132 inclusive seen<br><br>[5]                    |
| (b)   | 25  | B2                     |  |
| (c)   | 34 to 36 inclusive  | B2                     |  |
| 5 (a) | $x^2y$ oe   | B1                     | B1 for $2x^2$ , B1 for $4xy$<br><br>[3]  |
| (b)   | $4xy + 2x^2$ oe   | B2                     |  |
| 6 (a) |    | P1                     | $A$ and $B$ must be labelled correctly, with $A$ between South and West  |
| (b)   | $50\sin 30$ seen oe<br><br>25<br><br>ww2  | M1<br><br>A1           | Allow implicit form<br>If scale drawing used then M0<br><br>[3]  |



|               |                                       |                 |
|---------------|---------------------------------------|-----------------|
| <b>Page 4</b> | <b>Mark Scheme: Teachers' version</b> | <b>Syllabus</b> |
|               | <b>IGCSE – October/November 2010</b>  | <b>0607</b>     |

|           |   |                                  |  |
|-----------|---|----------------------------------|--|
| <b>11</b> | <p>Two correct simultaneous equations<br/>e.g. two of <math>9a + 3b = 6</math>, <math>a - b = 6</math>,<br/><math>a + b = -2</math>, <math>4a + 2b - 6 = -6</math> oe</p> <p>Correct method to eliminate one variable<br/>Condone one slip</p> <p><math>a = 2</math> and <math>b = -4</math></p> <p style="text-align: right;">www3</p> | <p>M1</p> <p>M1dep</p> <p>A1</p> | <p><u>Alternative Solution</u><br/>(y =) <math>a(x - -1)(x - 3)</math> oe</p> <p>Correct substitution of values for <math>x</math> and <math>y</math><br/>e.g. <math>-6 = a \times 1 \times -3</math></p> <p><math>a = 2</math> and <math>b = -4</math></p> <p>If M0 scored then SC2 for <math>(x - -1)(x - 3)</math> oe<br/>seen <u>and</u>, <math>a = 2</math> or <math>b = -4</math></p> <p style="text-align: right;"><b>[3]</b></p> |
| <b>12</b> | <p><b>D</b></p> <p><b>E</b></p> <p><b>A</b></p>   | <p>B1</p> <p>B1</p> <p>B1</p>    | <p style="text-align: right;"><b>[3]</b></p>   |