**M7 2012/2013 (ADEC Grade 7 Mathematics) mark scheme**

**Multiple Choice Questions (1 mark each; 10 marks in total):**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Question | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Answer | **C** | **B** | **A** | **C** | **A** | **B** | **D** | **B** | **C** | **D** |
| Type | **III** | **III** | **III** | **III** | **III** | **III** | **III** | **III** | **III** | **III** |

**Student Response Questions: *– NO Half Marks***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Answers** | **Mark Allocation** | **Total** | **TYPE** |
| **11a** | 18ab | [1] Correct answer only | **1** | **III** |
| **11b** | $5a$  | [1] Correct answer only | **1** | **III** |
| **11c** | $x=16$ | [1] Correct answer only | **1** | **III** |
| **11d** | $x = 3.5$  | [1] Correct answer | **1** | **III** |
| **11d** | $a^{2}- 3a$  | [2] Correct answer[1]One mistake | **2** | **III** |
| **11e** | $12(b+3)$  | [2] Factorised fully[1] 2(b + 10) | **2** | **III** |
| **12a** | 2*x* + 24 or *x* + *x* + 12 + 12 or equivalent | [1] Correct answer only | **1** | **I** |
| **12b** | 2*x* + 24 = 702*x* = 46 *x* = 23cmor70 – 24 = 46 ÷ 2 = 23 | [1] working[1] Correct answer | **2** | **II** |
| **13** |  | [1] for each correct coordinate | **4** | **I** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **14a** | DrawingF:\ADEC\Conrad\E Qions\Update Q13.PNG | 1 mark for correct drawingBase should be a square | **1** | **I** |
| **14b** | 5+ 5 = 8 + 2 | 1 mark for each correct value in the equation | **3** | **III** |
| **14c** | No. A cylinder has no verticesOr Edges are curved lines not straight lines | [1] No[1] Reason | **2** | **I** |
| **15** |

|  |  |  |
| --- | --- | --- |
| $$×$$ | $a$ | $3a$  |
| 2 | $2a$ | $6a$  |
| $4a$ | $4a^{2}$ | $12a^{2}$ |

 | [1] for each correct answer in the shaded section | **3** | **II** |
| **16a** | Huda should have added the two (***a***) terms instead of factorising |  | **1** | **II** |
| **16b** | $3a+12a =15a$  |  | **1** | **I** |
| **17a** | There are 5 more green stars than red stars | [1] or equivalent statement | **1** | **II** |
| **17b** | $x+\left(x-2\right)+ \left(x+5\right)= 30$  | [1] left hand side correct[1] right hand side correct | **2** | **II** |
| **17c** | 3*x* + 3 = 30 3*x* = 27*x* = 9Number of yellow stars is 9 – 2 = 7 | [1] Simplifying[1] Working[1] Correct answer for *x*[1] 7 yellow stars | **4** | **III** |
| **17d** | $ \frac{10}{50}$ Or equivalent | [1] Correct answer  | **1** | **III** |
| **17e** | 0 or impossible  | [1] Correct answer  | **1** | **III** |
| **17f** | {BlueBlue, BlueWhite, BluePink, WhiteWhite, WhitePink, PinkPink} | [3] All correct[2] 1 mistake[1] 2 or 3 mistakes[0] Only 1 or 2 correct | **3** | **II** |
| **17g** |  | [2] All correct and neat[1] carelessly drawn or small mistake  | **2** | **I** |