## Examlet 6 Rubrics

Table 1: Proof by contradiction (9 points)

| Criteria          | Mastered (3)       | Mastered (3)   Proficient (2)   Novice (1) |                    | Absent (0)     |
|-------------------|--------------------|--|--------------------|----------------|
|                   | · /                |  | ( )                | ` '            |
| Formation and     | proof begins       | proof does not                             | large issue with   | not a proof by |
| use of the nega-  | with correctly     | clearly state the                          | negation or next   | contradiction  |
| tion              | negated claim      | negated claim                              | step does not ex-  |                |
|                   | and the next step  |  | actly follow from  |                |
|                   | follows from that  |  | negation           |                |
|                   | negation           |  |                    |                |
| Criteria          | Mastered (2)       | Proficient (1)                             | Novice (0)         |                |
| Contradiction     | proof concludes    | proof concludes                            | proof does not     |                |
|                   | with a clear       | with a contradic-                          | end with a valid   |                |
|                   | contradiction      | tion but it is not                         | contradiction      |                |
|                   |                    | entirely clear                             |                    |                |
| Definitions and   | key concept defi-  | minor error in                             | major error in     |                |
| details           | nitions are stated | definitions or al-                         | definitions or al- |                |
|                   | correctly when     | gebra                                      | gebra              |                |
|                   | necessary (ratio-  |  |                    |                |
|                   | nal, irrational,   |  |                    |                |
|                   | etc.) and other    |  |                    |                |
|                   | ,                  |  |                    |                |
|                   | details (algebra)  |  |                    |                |
|                   | correct            |  |                    |                |
| Style and clarity | easy to follow     | argument slightly                          | proof hard to fol- |                |
|                   |                    | hard to follow                             | low                |                |

Table 2: Big-O claim (4 points)

| Criteria      | Mastered (2)          | Novice (0)            |                       |
|---------------|-----------------------|-----------------------|-----------------------|
| Yes/No answer | The answer is correct | The answer is incor-  |                       |
|               |                       | rect                  |                       |
| Criteria      | Mastered (2)          | Proficient (1)        | Novice (0)            |
| Explanation   | Completely clear and  | explanation not clear | missing or simply re- |
|               | correct explanation   | or missing details    | stating claim         |
|               |                       | needed                |                       |