| Proof Grading       | Rubric | (Abstract Algebra) | ) |
|---------------------|--------|--------------------|---|
| <i>J</i> - <i>J</i> | 0      | 0                  |   |

| Iten   | Item 0 points                 |                          | oints                    | 5 points             |                         | 10 points             |                        | 15 points             |                           | 20 points             |                          |
|--|-------------------------------|--------------------------|--------------------------|----------------------|-------------------------|-----------------------|------------------------|-----------------------|---------------------------|-----------------------|--------------------------|
| Mathematical Grammar Scratch wo  |                               | rk is                    | Several major issues     |                      | Many minor issues, or a |                       | Minor issues, but it's |                       | The proof is well written |                       |                          |
| presented as   |                               | as a proof.              | (5 points)               |                      | couple major issues.    |                       | still clear what was   |                       | and typed.                |                       |                          |
| Or did no  |                               | Or did not p             | oresent                  |                      |                         | (10 points            | (10 points)            |                       | ed.                       | (20 points)           |                          |
| enough o   |                               | enough of t              | the proof to             |                      |                         |                       |                        |                       | (15 po                    | ints)                 |                          |
| evaluate   |                               | evaluate                 |                          |                      |                         |                       |                        |                       |                           |                       |                          |
|  | (0 points)                    |                          |                          |                      |                         |                       |                        |                       |                           |                       |                          |
| Logical Flow   |                               | Explicitly or implicitly |                          | An in                | An important            |                       | Some statements do not |                       | Every correct statement   |                       | Every correct statement  |
|  |                               | assumed th               | med the conclusion. st   |                      | statement, or many      |                       | follow from previous   |                       | follows from previous     |                       | follows from previous    |
| Or did r   |                               | Or did not i             | realize there            | re statements do not |                         | statements.           |                        | statements, but the   |                           | statements in a clear |                          |
|  | were multi                    |                          | ple parts to             | follow from previous |                         | Or the reasoning from |                        | reader has to fill in |                           | manner.               |                          |
|  | the proof.                    |                          |                          | statements, or the   |                         | one statement to the  |                        | some minor details    |                           | (20 points)           |                          |
| Or did not p   |                               | oresent                  | supposed proof           |                      | next is not clear.      |                       | nimself.               |                       | the next category)        |                       |                          |
| enough of th   |                               | the proof to             | consisted of the correct |                      | (10 points)             |                       | (15 points)            |                       |                           |                       |                          |
| eva  |                               | evaluate                 |                          | statem               |                         | itements presented in |                        |                       |                           | category)             |                          |
|  |                               | (U points)               | the the                  |                      | ne wrong direction      |                       |                        |                       |                           |                       |                          |
|  |                               |                          |                          | (5 points)           |                         |                       |                        |                       |                           |                       |                          |
| Correctness  | Failed to s                   | to state Some claims     |                          | are                  | re Part of the The      |                       | e main Some claims a   |                       | ire                       | Some claims are       | Every claim is           |
| of the idea  | anything relevant to false of |                          | false or                 |                      | proof was               | poi                   | nt was                 | false or uniustified. |                           | false or uniustified  | I. mathematically valid. |
| the conclusion. or   |                               | sion, or                 | uniustified and          |                      | missing, but            | missed due            |                        | but the writer        |                           | but ended up          | the final claim results  |
|  | attempted to prove            |                          | the writer did not       |                      | the part that           |                       | an                     | appeared to have      | ave an                    | being irrelevant to   | in the theorem, and      |
|  | the wrong result.             |                          | appear to                | appear to            |                         | incorrect             |                        | understanding of      |                           | the proof.            | the logical flow was     |
| (0 points)<br>(The structure of the proof<br>does not apply; that is in the<br>logical flow) |                               |                          | understand why           |                      | was correct.            | . logic               | ical flow. why the co  | why the concl         | lusion                    | Or there was an       | at the 15 or 20 point    |
|  |                               | y; that is in the true.  |                          | n is                 | is (30 points)          |                       | (35 points)            | is true.              |                           | obvious typo that     | level.                   |
|  |                               |                          |                          |                      |                         |                       |                        | (50 points)           |                           | was meaningful        | (60 points)              |
| iogreatine wy  |                               |                          | (20 points)              |                      |                         |                       |                        |                       |                           | and incorrect.        |                          |
|  |                               |                          |                          |                      |                         |                       |                        |                       |                           | (55 points)           |                          |
|  |                               |                          |                          |                      |                         |                       |                        |                       |                           |                       |                          |

40/100 – The proof is completely off track, but shows something of merit.

20/100 – The proof is completely off track, but communicates clearly what the author is doing.

Comments are color coded:

Green – things that do not make sense

Blue – things that are incorrect

Orange – things that are mathematically true, but do not follow from what you've said.

Red – all other comments.

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