

## *Proof Grading Rubric (Abstract Algebra)*

Item	0 points	5 points	10 points	15 points	20 points		
Mathematical Grammar	Scratch work is presented as a proof. Or did not present enough of the proof to evaluate (0 points)	Several major issues (5 points)	Many minor issues, or a couple major issues. (10 points)	Minor issues, but it's still clear what was intended. (15 points)	The proof is well written. (20 points)		
Logical Flow	Explicitly or implicitly assumed the conclusion. Or did not realize there were multiple parts to the proof. Or did not present enough of the proof to evaluate (0 points)	An important statement, or many statements do not follow from previous statements, or the supposed proof consisted of the correct statements presented in the "wrong direction" (5 points)	Some statements do not follow from previous statements. Or the reasoning from one statement to the next is not clear. (10 points)	Every correct statement follows from previous statements, but the reader has to fill in some minor details himself. ( 15 points) <small>(incorrect statements fall under the next category)</small>	Every correct statement follows from previous statements in a clear manner. (20 points) <small>(incorrect statements fall under the next category)</small>		
Correctness of the idea	Failed to state anything relevant to the conclusion, or attempted to prove the wrong result. (0 points) <small>(The structure of the proof does not apply; that is in the logical flow)</small>	Some claims are false or unjustified and the writer did not appear to understand why the conclusion is true. (20 points)	Part of the proof was missing, but the part that was there was correct. (30 points)	The main point was missed due to an incorrect logical flow. (35 points)	Some claims are false or unjustified, but the writer appeared to have an understanding of why the conclusion is true. (50 points)	Some claims are false or unjustified, but ended up being irrelevant to the proof. Or there was an obvious typo that was meaningful and incorrect. (55 points)	Every claim is mathematically valid, the final claim results in the theorem, and the logical flow was at the 15 or 20 point level. (60 points)

40/100 – The author could not figure out the proof, acknowledged this, as explained where he got stuck. (As opposed to trying to BS a fallacious “proof”)

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.