

write your name big!

Jane Doe

Homework 5

increases with each resubmission
Version 1

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in case you work in a group

First rewrite the problem

Problem 1: Prove B/G prop. 1.11(v): If $m, n, p, q \in \mathbb{Z}$

$$\text{then } m(n + (p + q)) = (mn + mp) + mq.$$

Proof: We have $m(n + (p + q))$

Tell me where the proof starts

$$\stackrel{\text{Ax. 1.1 (iii)}}{=} mn + m(p + q)$$

$$\stackrel{\text{Ax. 1.1 (iii)}}{=} mn + (mp + mq)$$

$$\stackrel{\text{Ax. 1.1 (ii)}}{=} (mn + mp) + mq.$$

Write double-spaced so I can insert corrections

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big margin

This proves the proposition.

on the left!

you could also do this instead:

$$\text{Proof: We have } m(n + (p + q)) = mn + m(p + q) \quad (\text{distributive})$$

$$= mn + (mp + mq) \quad (\text{distributive})$$

$$= (mn + mp) + mq \quad (\text{assoc. +})$$

This proves the proposition.