

# Math 204- Discrete Mathematics, Spring 2010

Quiz 2, March 15, 2010, 17:40 group

Time: 25 minutes

*Write your solutions clearly, provide explanation, etc.*

*Do not forget to write your name and ID No on top of the page!*

## Problem 1 (5 pts each).

a. Prove the following identity of sets:  $(B - A) \cup (C - A) = (B \cup C) - A$

b. Compute the sum and simplify its value as much as possible.

$$\sum_{j=0}^7 64 \left(\frac{1}{2}\right)^j$$

## Problem 2 (8+2 pts each).

a. Write an algorithm that counts the the number of times the same number occurs consecutively (in succession) in a given list of integers. (Write a pseudocode and remember things we look for in an algorithm: general, precise, ends in finitely many steps, ...)

b. When applied to the list 1,2,2,5,3,3,4,4,4,12 your algorithm should return 4. Clearly write down how it proceeds on this list.