

CSC 220

Fall 2020

Homework #1 due 9/22/2020 (at 11:59 pm on 9/21/2020)

Instruction on how to submit your answers:

Only the last submission will be graded, log into D2L and upload your submission under homework#1.

If your answers are typed: you will upload your submission file in D2L.

If you decided to write down your answers, please take a picture of each page put all pages into one folder and upload the entire folder (you can also use zip utility and zip the folder and then upload it).

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1. Use induction to prove $3 + 3 * 5 + 3 * 5^2 + \dots + 3 * 5^n = \frac{3*(5^{n+1}-1)}{4}$
 2. Use induction to prove $(\bigcap_{j=1}^n A_j)' = \bigcup_{j=1}^n A_j'$, $n > 1$.
 3. Prove if n is an integer and $3n+2$ is odd then n is odd.
 4. Prove if $x+5$ is odd then x is even.