Worksheet 9 Review

March 27, 2020

Question 1

a. For every set of size 0 has 0 subsets of size 2.

b. Let $n = 0$. Let S be an arbitrary set. Assume S has size 0.

Since S has size 0, empty subsets are the **only** subsets that can be included in S.

Then, because we know empty subsets have size 0, we can conclude there are 0 subsets of size 2.

It follows from above that the base case holds.

> **Correct Solution:**
>
> **We want to show every set S of size 0 has 0 subsets of size 2**.
>
> Since S has size 0, empty subsets are the **only** subsets that can be included in S.
>
> Then, because we know an empty subset have size 0, we can conclude there are 0 subsets of size 2.

Notes:

- Professor specifically mentions **We want to show every set S of size 0 has 0 subsets of size 2**

- Professor doesn't include conclusion at the end of proof

- Under which cases conclusion to a proof are included.

Question 2

Question 3