Lecture 5

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1 Definitions

Collection: A set of objects, usually denoted with capital letters.

i **Roster**: $A = \{1, 2, 3, 4, 5\}$

ii **Sentence**: eg. a set of positive integers

iii **Set-Builder**: $B = \{x \in \mathbb{Z} | x \leq 5\}$

Element: An object in a collection, usually denoted with lowercase letters.

2 Notes

Q: What does result mean?

what would we need to do to prove it?

(i) For all integers

$$n \geq 5, 2^n > n^2$$

(ii) There is an integer α such that:

$$\alpha^2 + 29\alpha + 209 \geq 0$$