Counting and set theory is also on the exam

Power set – all combos including null set

Do the gcd exercises on webcourses

Pidgeonhole principle

Look at supplemental notes

He might not put a Bayes theorem question.

KNOW Theorem 4.1.1!

“Prove or disprove such that there are integers **insert algebraic equation**”

“Show that there is no positive integer < such and such so these two can be written as a linear combination. Gcd is smallest number, this number smaller than gcd, therefore it can’t exist”

Formal definition of gcd

One unique gcd

A\*b = gcd(lcm)

Be able to prove gcd is smallest integer

Divison algorithm – unlikely on how Euclids algorithm is proven

Know Bezout’s theorem

Implications of Fundamental theorem of arithmetic – Counting problems – How many common divisors between a and b. (Get prime factorization, multiply choices together, don’t forget 0)

Prove how numbers are irrational (sum, product)

Well ordering principle

Form for proofs by induction (Write IH for inductive hypothesis – the thing you are assuming)

IS – Where you prove p(k+1) is true.

Well ordering principle – in a set of numbers, there exists a number that is the smallest number. – Proof that induction works

Be able to use recursive definitions

Rewrite things recursively