1. Little teasers. Make sure you know at least and at most and be able to use complement. Do basic combinatorics. Understand sample space.
2. You should be able to do Bayes word problems (an example is problem 3.33 or book example 3d etc). Understand conditional probability and independence.
3. Be able to create a probability space and a random variable from a word problem with dice, urns etc. An example might be problem 4.35 from homework. Be able to find probability mass functions and cumulative distribution function of random variables I give you. Be able to use rules of Expectation, Variance to calculate these quantities for algebraic combinations of random variables. Be able to understand when variables are independent and when not.
4. Any of the following theorems could be on final for you to prove.
    a. From definition of expectation E(X) prove that E(c*X)= c*E(X)
    b. From definition of expectation E(X+Y) = E(X)+E(Y)
    c. Prove from def of variance and theorems about E(X) (expectation of X) that Var(X)= E(X^2)-(E(X)^2
    d. Be able to explain why variance does not add in general (where Var(X+Y) ≠Var(X)+Var(Y) in general.

5. Understand repeated independent Bernoulli trials very well and be able to derive Expected and variance of all the normal concepts like # of successes and Average number of successes. Explain why small variance of large average is important.