

109 Spring 2011 - Counting

Exercise. A true-false test has 10 questions.

(a) In how many ways can a student answer the questions if every question is answered?

(b) In how many ways can a student answer the questions if there is a penalty for guessing and the student leaves some (or all) answers blank?

Exercise. Prove that if $n \in \mathbb{Z}^+$ then $\binom{2n}{n}$ is even.

Exercise. Prove that \mathbb{R} is an infinite set.