Undergraduate Problem Solving Contest

Problem 6

Due April 2nd 2014

Let Kings be worth 13, Queens worth 5, Jacks worth 1, and all other cards worth 0. Suppose the first 12 cards of a well-shuffled (standard 52 card poker) deck have a total worth of 38 points. What is the probability that the next 6 cards have a total greater than or equal to the first 12 cards?

Show your work.

In the spirit of UPSC, you should not use the internet or look up the solution in a book. Please include your **name**, **student ID number**, and **email address** on your solution.