

Probability and Statistics

Home Work due Feb 3, 2005.

Q1. A random experiment consists of drawing a card from an ordinary deck of 52 cards. Each card is assigned the probability $\frac{1}{52}$. C_1 is the event (set) consisting of all thirteen hearts and C_2 is the event consisting of the 4 kings. Find $P(C_1)$, $P(C_2)$, $P(C_1 \cup C_2)$ and $P(C_1 \cap C_2)$.

Q2. What is the probability that a random bridge hand consists of 6Spades, 4 Hearts , 2 Diamonds and and 1Club.

Q3. Three dice are rolled. Given that all the three face are distinct (no number appears more than once) what is the probability that one of them is a 6.

Q4. A factory has three machines A , B and C , that manufacture bolts. They produce respectively 25%, 35% and 40% of the total number of bolts and respectively 5%, 4% and 2% of their output is defective. A bolt drawn at random is found to be defective. Calculate the probabilities that it was produced by A , B and C .