

Mathematics For Computing

Counting and Probability

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Counting and Probability

A deck of cards contains six cards numbered 1, 2, 3, 4, 5, 6 and 7. An experiment is carried out in which three cards are chosen from this deck **without** replacement and the result is recorded as an ordered triple, such as (1,2,4), where this result is different from the result (2,4,1).

- (i) Let A be the event that the first card is odd and B the event that the last card is a 7. Calculate the number of elements in each of the sets A , B , $A \cap B$ and $A \cup B$.
- (ii) Hence calculate the probabilities of A , B , $A \cap B$ and $A \cup B$. [8]

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