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Q 69) A bag contains 8 red balls and 4 black balls and another bag contains 6 red balls and 5 black balls. One ball is transferred from the first bag to the second bag then a ball is drawn from the second bag . If this ball happens to be red ,find the probability that a black ball was transferred.

Ans)

Let p1 = probability of transferring black ball = 4/12

Let p1’= probability of now drawing a red ball= 6/12

Let p2= probability of transferring red ball = 8/12

Let p2’ =probability of now drawing a red ball = 7/12

Using BAYES THEOREM

Required probability =

=

=

=3/10

Final Answer= 3/10