

Previous Year Question with Solution :

Q) A bag contains 2 white and 4 black balls. A ball is drawn 5 times with replacement. The probability that at least 4 of the balls drawn are white is _____.

Soln:

Probability for white ball = $2 / 6 = 1 / 3$

Probability for black ball = $4 / 6 = 2 / 3$

Required probability = ${}^5C_5 * (1 / 3)^5 * (2 / 3)^0 + {}^5C_4 * (1 / 3)^4 * (2 / 3)$

= $(1 / 3)^4 [(1 / 3) + [5] * [2 / 3]]$

= $11 / 3^5$

= $11 / 243$.