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EE23010 NCERT Exemplar

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Question 12.13.3.75

A bag contains 5 red and 3 blue balls. If 3 balls are drawn at random without replacement the probability that exactly two of the three balls were red, the first ball being red is

Solution: See (??)

The desired probability is

$$N = 7, R = 4, B = 3, G = 0, r = 1, b = 1, g = 0$$
 (1)

$$\Pr(1, 1, 0) = \frac{{}^{4}C_{1}{}^{3}C_{1}}{{}^{7}C_{2}}$$
 (2)

$$=\frac{4}{7}\tag{3}$$