

## Worksheet: Probability

IB · Class 12 · Mathematics · 3 questions · 14 marks

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_ / 14

**Q1.** A bag contains 5 red and 3 blue balls. Two balls are drawn one after another without replacement. Find the probability that both are red. *[3 marks]*

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**Q2.** There are two bags. Bag I: 3 red, 4 black balls. Bag II: 5 red, 6 black balls. One bag is selected at random (equal probability) and one ball is drawn. The ball is red. Find the probability that it came from Bag I. *[5 marks]*

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**Q3.** The probability that a student passes an exam is  $\frac{2}{3}$ . In a group of 5 students, find: (i)  $P(\text{at least 2 pass})$ , (ii) the mean and variance of the number of students who pass. *[6 marks]*

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