

## Worksheet: Probability

Gujarat State Board · Class 12 · Mathematics · 5 questions · 16 marks

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

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

Score: \_\_\_\_\_ / 16

**Q1.** A pair of dice is thrown. Find the probability the sum is 7 given the first die shows 3. [2 marks]

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**Q2.** A coin is tossed 5 times. Find the probability of at least 3 heads. [3 marks]

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**Q3.** X takes values 0,1,2,3 with probabilities 0.1, 0.3, 0.4, k. Find k,  $E(X)$ , and  $\text{Var}(X)$ . [4 marks]

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**Q4.** A bag has 5 white and 3 black balls. Two are drawn. Find the probability they are different colours. [3 marks]

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**Q5.** An examinee guesses, copies, or knows an answer with probabilities 0.1, 0.2, 0.7; correct with probability 0.2, 0.8, 1 respectively. Find  $P(\text{knew} | \text{correct})$ . [4 marks]

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