# Worksheet: Probability

Uttar Pradesh State Board · Class 11 · Mathematics · 8 questions · 32 marks

| Name: _____ | Date: _____ | Score: _____ / 32 |
|---|---|---|

**Q1.** A die is thrown once. Find the probability of getting a number greater than 4. *[2 marks]*

**Q2.** A die is thrown. Let A = 'an odd number appears' and B = 'a number greater than 4 appears'. Are A and B mutually exclusive? Are they exhaustive? *[3 marks]*

**Q3.** A card is drawn at random from a standard deck of 52 cards. Find the probability that it is a King or a Heart. *[4 marks]*

**Q4.** Two dice are thrown. Find the probability that the sum is at least 4, using the complement. *[4 marks]*

**Q5.** A sample space is S={w1,w2,w3,w4}. Check whether the assignment P(w1)=0.4, P(w2)=0.3, P(w3)=0.2, P(w4)=0.05 is a valid probability assignment. *[3 marks]*

**Q6.** Two dice are thrown simultaneously. Find the probability that the sum is at least 9. *[6 marks]*

**Q7.** In a group of students, 50% study Physics, 40% study Chemistry, and 20% study both. If a student is picked at random, find the probability that the student studies Physics or Chemistry. *[5 marks]*

**Q8.** A coin is tossed three times. Give an example of two events that are mutually exclusive but not exhaustive, and justify both properties. *[5 marks]*