# Class 10 Mathematics · Chapter 14: Probability

**Worksheet** · 20 marks · about 40 minutes · based on NCERT

Name _____ Class and section _____ Date _____

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**1.** A token is drawn 'at random' from a box of tokens. This phrase means that [1]

(a) every token in the box is equally likely to be drawn
(b) the token drawn is the one on top
(c) tokens of the most common colour cannot be drawn
(d) the token is drawn after looking into the box

**2.** A letter is chosen at random from the letters of the word KOLKATA. The probability that it is the letter K is [1]

(a) $\frac{1}{5}$
(b) $\frac{1}{7}$
(c) $\frac{2}{7}$
(d) $\frac{2}{5}$

**3.** A card is drawn from a well-shuffled deck of 52 playing cards. The probability that it is a black ace is [1]

(a) $\frac{1}{52}$
(b) $\frac{1}{13}$
(c) $\frac{1}{26}$
(d) $\frac{2}{13}$

**4.** Every token in a box is red, green or yellow. For a token drawn at random, P(red) = $\frac{1}{4}$ and P(green) = $\frac{5}{12}$. Then P(yellow) is [1]

(a) $\frac{1}{3}$
(b) $\frac{2}{3}$
(c) $\frac{1}{6}$
(d) $\frac{5}{12}$

**5.** A packet has 12 pencils and every one of them is an HB pencil. A pencil is taken out at random. The probability that it is an HB pencil is [1]

(a) 1
(b) 0
(c) $\frac{1}{12}$
(d) 12

**6.** A tea stall in Darjeeling keeps 60 tea bags in a box: 18 green tea, 30 masala tea and the rest lemon tea. A tea bag is taken out at random. Find the probability that it is (i) lemon tea, (ii) not masala tea. [2]

**7.** The probability that a student of a class of 40 in Bhopal, chosen at random, travels to school by bus is 0.35. Find the probability that the student does not travel by bus, and the number of students who do not. [2]

**8.** A month is picked at random from the twelve months of a year. Find the probability that (i) it has 31 days, (ii) its name begins with the letter J. [2]



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**9.** At a school fete in Lucknow, tickets numbered 1 to 40 are put in a box and one is drawn at random. Find the probability that the number on it is (i) a multiple of 5, (ii) a perfect square, (iii) a number whose digits add up to 4. [3]

**10.** A bag has 2 green and 8 yellow tennis balls. Arjun says, 'A ball drawn at random is either green or yellow, so P(green) = $\frac{1}{2}$.' Is he right? Find P(green) and P(yellow), and check that they add to 1. [3]

**11.** Two dice, one white and one black, are thrown together. Find the probability that (i) both show the same number, (ii) the product of the numbers is less than 5, (iii) the number on the white die is greater than the number on the black die. [3]