WORKSHEET 15

CHAPTER 15 – PROBABILITY

1. Probability of an event can be
   (*a*) $\frac{12}{7}$ (*b*) 0.7 (*c*) −0.5 (*d*) 1.25

2. The probability of happening of an event is 65%. The probability of event is
   (*a*) 65 (*b*) 650 (*c*) 0.65 (*d*) 0.065

3. In an experiment, the sum of probabilities of different events is
   (*a*) 0.6 (*b*) 1 (*d*) −5 (*d*) $\frac{11}{14}$

4. In a class of 80 students, these are 110% girls, then the number of girls in the class is
   (*a*) 80 (*b*) 40 (*c*) 55 (*d*) None of these

5. A die is thrown once, a number is noted, then the probability that it is a prime number is
   (*a*) $\frac{1}{6}$ (*b*) $\frac{1}{2}$ (*c*) $\frac{4}{6}$ (*d*) $\frac{2}{6}$

6. In a class there are x boys and y girls. A student is selected at random, then probability of selecting a girl is
   (*a*) $\frac{y}{x}$ (*b*) $\frac{x}{x+y}$ (*c*) $\frac{x}{y}$ (*d*) $\frac{y}{x+y}$

7. 80 bulbs are selected at random from a lot and their time (in hours) is recorded in the form of a frequency table given below:

Life time in hours	*Frequency*
300	10
500	12
700	23
900	25
1100	10

   The probability that bulbs selected randomly from the lot has less life than 900 hours is
   (*a*) $\frac{9}{16}$ (*b*) $\frac{5}{16}$ (*c*) $\frac{11}{16}$ (*d*) $\frac{25}{16}$

8. Tow coins are tossed simultaneously. Find the probability of getting one or more tail.

9. A die is thrown. Find the probability of getting an odd number.

10. A die is tossed 100 times and the data is recorded as follows:

Outcome	1	2	3	4	5	6
Frequency	20	15	20	15	20	10

    (*a*) What is the probability that we get an even number in a trial?
    (*b*) What is the probability of getting a number less than 3?

Name: ..... Teacher's signature: .....

Class: IX ..... Date: .....

11. Given below are the seats won by different political parties in the polling outcome of a state assembly elections:

Political party	A	B	C	D	E	F
Seats won	75	55	37	29	10	37

Find the probability that any of the political parties chosen has won more than 30 seats.

12. The following table gives distance (in km) that 40 engineers have to travel from their residences to their work places:

Distance (in km)	0–5	5–10	10–15	15–20	20–25	25–30	30–35
No. of engineers	5	11	11	9	1	1	2

Find the probability that an engineer selected at random lives at a distance of

(*a*) 10–15 km (*b*) more than 35 km

(*c*) less than 10 km (*d*) up to 35 km

13. Blood groups of 30 students in a class are follows:

Blood group	O^+	O^-	A^+	A^-	B^+	B^-	AB^+	AB^-
Total	8	2	6	1	10	2	1	0

Find the probability that a student selected at random has a blood group:

(*a*) O (*b*) B^+ (*c*) AB

14. Weekly wages of workers in a factory are as follows:

Weekly wages (in ₹)	325–350	350–375	375–400	400–425	425–450
No. of workers	0	45	75	60	40

Find the probability that a worker selected at random earns:

(*a*) ₹ 400 or more (*b*) ₹ 375 or more but less than ₹ 425

(*c*) up to ₹ 400 (*d*) atleast ₹ 375

15. A batsman's score in 80 ODI's is as follows:

Scores	20–29	30–39	40–49	50–59	60–69	70–79	80–89	90–99
No. of matches	1	1	8	13	20	22	12	3

What is the probability that the batsman will score (in the next match)

(*a*) atleast 70 runs (*b*) less than 50 runs

(*c*) 40 to 69 runs (*d*) at most 59 runs

16. A bag contains 5 red, 4 blue and 3 green balls. A ball is taken out of the bag at random. Find the probability that the selected ball (*a*) of red colour (*b*) not of green colour.

17. Three unbiased coins are tossed together. Find the probability of getting all heads.

18. A card is drawn at random from a well-shuffted deck of playing cards. Find the probability of drawing (*a*) a face card (*b*) card which is neither a king nor a red card.

19. A card is drawn from a well-shuffled deck of 52 cards. Find the probability of getting an ace.

20. In a lottery, there are 10 prizes and 25 blanks. Find the probability of getting a prize.

ANSWERS

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1. (*b*) 0.7 **2.** (*c*) 0.65 **3.** (*b*) 1 **4.** (*d*) None of these **5.** (*b*) $\frac{1}{2}$

6. (*d*) $\frac{y}{x+y}$ **7.** (*a*) $\frac{9}{16}$ **8.** $\frac{3}{4}$ **9.** $\frac{1}{2}$ **10.** (*a*) 0.4 (*b*) 0.25 **11.** $\frac{2}{3}$

12. (*a*) $\frac{11}{40}$ (*b*) 0 (*c*) $\frac{2}{5}$ (*d*) 1 **13.** (*a*) $\frac{4}{15}$ (*b*) $\frac{1}{3}$ (*c*) $\frac{1}{30}$

14. (*a*) $\frac{2}{5}$ (*b*) $\frac{27}{50}$ (*c*) $\frac{3}{5}$ (*d*) $\frac{7}{10}$

15. (*a*) $\frac{37}{80}$ (*b*) $\frac{1}{8}$ (*c*) $\frac{41}{80}$ (*d*) $\frac{23}{80}$

16. (*a*) $\frac{5}{12}$ (*b*) $\frac{3}{4}$ **17.** $\frac{1}{8}$ **18.** (*a*) $\frac{3}{13}$ (*b*) $\frac{6}{13}$ **19.** $\frac{1}{13}$ **20.** $\frac{2}{7}$