

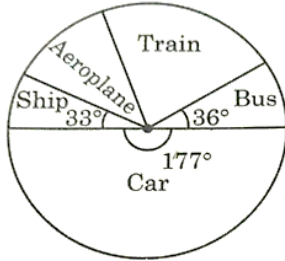


INDIAN SCHOOL AL WADI AL KABIR
Class X, Mathematics
PROBABILITY WORKSHEET 7

OBJECTIVE TYPE (1 Mark)

Q.1.	A card is drawn at random from a well-shuffled pack of 52 cards. The probability that the card drawn is not an ace is							
	A	$\frac{1}{13}$	B	$\frac{9}{13}$	C	$\frac{4}{13}$	D	$\frac{12}{13}$
Q.2.	Two fair coins are tossed. What is the probability of getting at the most one head?							
	A	$\frac{3}{4}$	B	$\frac{1}{4}$	C	$\frac{3}{8}$	D	$\frac{1}{2}$
Q.3.	A dice is rolled twice. The probability that 5 will not come up either time is							
	A	$\frac{11}{36}$	B	$\frac{25}{36}$	C	$\frac{13}{36}$	D	$\frac{1}{3}$
Q.4.	A box contains cards numbered 6 to 55. A card is drawn at random from the box. The probability that the drawn card has a number which is a perfect square, is							
	A	$\frac{7}{50}$	B	$\frac{7}{55}$	C	$\frac{1}{10}$	D	$\frac{5}{49}$
Q.5.	Probability of happening of an event is denoted by p and probability of non-happening of the event is denoted by q. Relation between p and q is							
	A	$p + q = 1$	B	$p = 1, q = 1$	C	$p = q - 1$	D	$p + q + 1 = 0$
Q.6.	Which of the following cannot be the probability of an event?							
	A	0.019	B	3%	C	$\frac{11}{10}$	D	$\frac{25}{32}$
Q.7.	In a survey, it is found that every fifth person has a vehicle. The probability of a person NOT having a vehicle is							
	A	$\frac{4}{5}$	B	5%	C	$\frac{1}{5}$	D	95%
Q.8.	A bag contains 3 red balls, 5 white balls and 7 black balls. The probability that a ball drawn from a bag at random will be neither red nor black is							
	A	$\frac{1}{5}$	B	$\frac{1}{3}$	C	$\frac{7}{15}$	D	$\frac{8}{15}$
Q.9.	Two dice are thrown together. The probability that they show different number is							
	A	$\frac{1}{6}$	B	$\frac{2}{3}$	C	$\frac{1}{3}$	D	$\frac{5}{6}$
Q.10.	A girl calculates that the probability of her winning the first prize in a lottery is 0.04. If 8000 tickets are sold, then the number of tickets she bought is							
	A	480	B	200	C	320	D	160
ASSERTION AND REASONING								
DIRECTION: A statement of Assertion (A) is followed by a statement of Reason (R) . Choose the correct option. (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).								

	(b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A). (c) Assertion (A) is true but Reason (R) is false. (d) Assertion (A) is false but Reason (R) is true.																	
Q.11.	Assertion(A): The probability that a leap year has 53 Sundays is $\frac{2}{7}$. Reason(R): The probability that a non-leap year has 53 Sundays is $\frac{5}{7}$.																	
	Questions of 2 marks each																	
Q.12.	2 cards of hearts and 4 cards of spades are missing from a pack of 52 cards. (i) What is the probability of getting a black card from the remaining pack? (ii) What is the probability of getting a king of diamond from the remaining pack?																	
Q.13.	Cards numbered 7 to 40 were put in a box. Poonam selects a card at random. What is the probability that Poonam selects a card which is multiple of 7?																	
Q.14.	Two dice are thrown at the same time and the product of numbers appearing on them is noted. Find the probability that the product is a prime number.																	
Q.15.	A bag contains some balls of which x are white, 2x are black and 3x are red. A ball is selected at random. What is the probability that it is (i) not red (ii) white.																	
Q.16.	A die has its 6 faces marked 0,1,1,1,6,6 Two such dice are thrown together and the total is recorded. (i) How many different scores are possible? (ii) What is the probability of getting a total of 7?																	
	Questions of 3 marks each																	
Q.17	Two coins are tossed simultaneously. What is the probability of getting (i) at least one head (ii) at most one tail (iii) a head and a tail?																	
Q.18.	An integer is chosen between 0 and 100. What is the probability that it is (i) divisible by 7? (ii) not divisible by 7?																	
Q.19.	A year is selected at random. Answer the following: i) What is the probability that a non-leap year has 53 Fridays? ii) What is the probability that a leap year has 53 Fridays? iii) What is the probability that a non-leap year has 52 Saturdays?																	
Q.20	A box contains 90 discs which are numbered 1 to 90. If one disc is drawn at random from the box, find the probability that it bears a: (i) 2-digit number less than 40. (ii) number divisible by 5 and greater than 50. (iii) a perfect square number.																	
Q.21.	A card is drawn at random from a well-shuffled pack of 52 playing cards. Find the probability of getting: (i) a red queen (ii) a card that is not a face card (iii) a number card of hearts																	
	Questions of 5 marks each																	
Q.22.	Two fair dice are rolled simultaneously. Find the probability of the following events: (i) The sum of the numbers is equal to 7 (ii) The product of numbers on two dice is less than 12 (iii) The difference is a prime number (iv) At least one die shows a number greater than 4.																	
Q.23.	A survey was done on 1000 elementary and secondary schools of Assam and they were classified by the number of computers they had.																	
	<table><tr><td>No. of computers</td><td>1-10</td><td>11-20</td><td>21-50</td><td>51-100</td><td>101 and more</td></tr><tr><td>No. of schools</td><td>250</td><td>200</td><td>290</td><td>180</td><td>80</td></tr></table>						No. of computers	1-10	11-20	21-50	51-100	101 and more	No. of schools	250	200	290	180	80
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One schools is chosen at random. Find the probability that the school chosen at random has (i) more than 100 computers (ii) 50 or fewer computers (iii) no more than 20 computers (iv) 10 or less than 10 computers																		

CASE STUDY QUESTION: In a survey on holidays , 120 people were asked to state which type of transport they used on their last holiday. The following pie chart shows the result of the survey. Based on the above information answer the following questions.								
Q.24.				If one person is selected at random, find the probability that he/she travelled by bus or ship.				
Q.25.				Which is most favourite mode of transport and how many people used it?				
Q.26.				A person is selected at random. If the probability that he did not use train is 4/5, find the number of people who used train.				
Q.27.				The probability that randomly selected person used aeroplane is 7/60. Find the revenue collected by air company at the rate of ₹5000 per person.				
ANSWERS								
	Q.1.	D	Q.2.	A	Q.3.	B	Q.4.	C
	Q.5.	A	Q.6.	C	Q.7.	A	Q.8.	B
	Q.9.	D	Q.10.	C	Q.11.	c	Q.12.	(i)22/46 , (ii) 1/46
	Q.13.	5/34	Q.14.	6/36= 1/6	Q.15.	(i)1/2 (ii)1/6	Q.16.	(i) 6, (ii) 12/36=1/3
	Q.17.	(i) 3/4 (ii) 3/4 (iii) 1/2	Q.18.	(i) 14/99, (ii)85/99	Q.19.	(i)1/7, (ii) 2/7, (iii) 6/7	Q.20.	(i)30/90=1/3 (ii)8/90=4/45 (ii)9/90=1/10
	Q.21.	(i)2/52=1/26 (ii)40/52=10/13 (iii)9/52	Q.22.	(i)6/36=1/6 (ii)18/36=1/2 (iii)16/36=4/9 (iv)20/36= 5/9	Q.23.	(i)80/1000=8/25 (ii)740/1000= 37/50 (iii)45/100= 9/20 (iv)250/1000 = 1/4	Q.24.	23/120
	Q.25.	59	Q.26.	24	Q.27.	₹70000		
