Raghav is selected for a school cricket club. He has to select a jersey number of his  
choice between 0 to 99, both inclusive.  
1. What is the probability that he will select either an even number jersey or a jersey  
number divisible by 3?

Ans:

1).Probability of Raghav select either an even number jersey or number divisible by 3 is 67/100

2. What is the probability that he will choose a jersey number neither divisible by 3  
 or by 5?

53/100

3. 150 employees are working in an NPTEL office. 80 of them drink tea, 90 drink  
 coffee. Some of them may drink both, but every person drinks at least one of these  
 two beverages. What is the probability that a person chosen at random from this  
 population drinks both tea and coffee? Draw a Venn Diagram and calculate

Ans : 20/150

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| 4. 90 students have participated in the annual cultural festival of a college comprising  of singing, dancing and acting competitions. The number of students who did not  participate in the acting or dancing competitions are 10. The number of students  who participated only in dancing competition are 15. The total number of students  who participated in the acting competition are 50. The number of students who  participated in both the singing and the acting competition are 20. The number of  students who participated in both the dancing and the acting are 15. The students  who participated in all the three competitions are 10.  Let S be the event that a student participated in a singing competition.  Let D be the event that a student participated in a dancing competition.  Let A be the event that a student participated in an acting competition.  From the given information, prepare a Venn diagram and aswer following questions |
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| a. What is the probability that a student selected at random participated only in the dancing competition? |
| b. What is the probability that a student selected at random participated in both the singing and the dancing competitions? |
| c. What is the probability that a student selected at random has participated in boththe singing and the acting competitions but not participated in the dancing competition?  Ans:   1. 15/90 2. 25/90 3. 10/90     5. In a horse race, six horses numbered from 1 to 6 are participating. What is the proba- bility that all the even numbered horses complete the race first, that is even numberedhorses occupy the first, second and third places?  Ans :  1/20  6. A letter is selected from the letters of the phrase “MACHINE”. What is the probability that the letter selected is not a vowel?  Ans:4/7 |