Solutions :

1. Ans : (a)

1. Ans : (a)

1. Ans : (a)

Required probability

1. Ans : (d)

Now

i.e. A and B independent but not equally likely

1. Ans : (b)

P(India wins)

P(India Loses)

Required probability

1. Ans : (d)

The number of numbers divisible by

Required probability 

1. Ans : (d)

1. Ans : (c)

1. Ans : (c)

1. Ans : (d)

1. Ans : (c)

1. Ans : (b)

Required probability

1. Ans : (c)

Since E and F are independent

1. Ans : (c)

P(getting exactly one red ball) 

1. Ans : (d)

E : eldest child is a girl

F: atleast one is a girl

Required probability

1. Ans : (c)

Required probability

1. Ans : (d)

E : First battery is dead

F : Second battery is dead

P(both are dead)

1. Ans : (b)

Let X denote the number of success where success is getting head





1. Ans : (c)

E : Sum is less than 6

Required probability

1. Ans : (c)
2. Ans : (b)

Let X denote the number of success where success is guessing correct answer



1. Ans : (c)

1. Ans : (d)

1. Ans : (d)

1. Ans : (b)

E ; event that the student fail in physics

F : event that the student fail in maths

1. Ans : (d)

E : A and B obtain the same answer

F : Both A and B obtain correct answer

(both A and B make same error and get same incorrect answer)

Required probability

1. Ans : (d)

(defective pen)

(atmost one defective)



1. Ans : (b)

1. Ans : (c)

Two integers can be selected in  ways. Since the sum is odd one must be even and another is odd.

They can be selected in ways

Required probability 

1. Ans : (c)

The number of numbers divisible by 24 = 3

Required probability

1. Ans : (a)

Variance

1. Ans : (c)

Required probability 

1. Ans : (c)





1. Ans : (b)

1. Ans : (a)

To get the sum 6, the dice should show, {(1,5),(2,4),(3,3),(4,2),(5,1)}

Required probability

1. Ans : (a)

The result on the fifth toss doesn’t depend on the results of the earlier tosses. Therefore required probability

1. Ans : (c)



1. Ans : (a)

Number of lines that can be drawn by joining any two points of a hexagon

Number of diagonals

Required probability

1. Ans : (d)

Required probability

1. Ans : (d)

P(odd number) = p

Then the probability of even number = 2p and

p(even number)

Sum of two numbers is even = either both are odd or both are even.

Required probability

1. Ans : (c)

P(drawing a red ball in the second drawn)

1. Ans : (a)

The possible combination are (2,3,6) , (2,4,8)

Required probability

1. Ans : (d)

Minimum is 12

1. Ans : (a)
2. Ans : (d)
3. Ans : (a)

p = p(a person is a swimmer)

Required probability 

1. Ans : (a)

 is independent of r

1. Ans : (d)

1. Ans : (d)

1. Ans : (b)

1. Ans : (a)

1. Ans : (c)

Let E be the event of placing atleast one letter in an incorrect envelope. The total number of ways of placing the letters into the envelope = 5!

(Placing all letters correctly)

1. Ans : (c)

P(atleast one bulb is good) = 1- p(no of bulb is good)



1. Ans : (b)



1. Ans :(d)

throwing 1 or 3)

1. Ans : (c)

The total probabilities of answering the questions 

To pass the exam the students should answer 3 or 4 or 5 questions correctly.

Hence the number of ways of answering the exam 

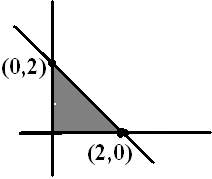
Required probability

1. Ans : (b)

probability distribution

1. Ans : (a)

P(only one of them survives)

1. Ans : (b)
2. Ans : (c)

Corner points

(0,0) 0

(0,2) 4

(2,0) 6

**Answer Key :**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1) a | 2) a | 3) a | 4) d | 5) b | 6) d | 7) d | 8) c | 9) c | 10) d |
| 11) c | 12) b | 13) c | 14) c | 15) d | 16) c | 17) d | 18) b | 19) c | 20) c |
| 21) b | 22) c | 23) d | 24) d | 25) b | 26) d | 27) d | 28) c | 29) c | 30) c |
| 31) a | 32) c | 33) c | 34) b | 35) a | 36) a | 37) c | 38) a | 39) d | 40) d |
| 41) c | 42) a | 43) d | 44) a | 45) d | 46) a | 47) a | 48) d | 49) d | 50) b |
| 51) a | 52) c | 53) c | 54) b | 55) d | 56) c | 57) b | 58) a | 59) b | 60) c |