120+ PROBABILITY QUESTIONS WITH SOLUTION

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- 1. A bag contains 8 apple and 6 orange. Four fruits are drawn out one by one and not replaced. What is the probability that they are alternatively of different fruits?
 - A) 10/143 B) 15/120
 - D) 13/120
 - C) 20/143
 - D) 26/110
 - E) None

View Answer

Option C Solution: Fruits can be drawn in two format AOAO and OAOA Apple drawn 1st P=8/14*6/13*7/12*5/11 Orange drawn 1st P=6/14*8/13*5/12*7/11 Adding both we get 2[8*7*6*5/14*13*12*11]=2*(10/143)=20/ 143.

- 2. In an interview the probability of Praveen to got selected is 0.4. The probability of Geetha to got selected is 0.5. The probability of Sam to got selected is 0.6. The probability of Suresh to got selected is 0.8. What is the probability that at least 2 of them got selected on that day?
 - A) 0.806
 - B) 0.632 C) 0.688
 - D) 0.732
 - E) None

View Answer

Option A Solution: Required probability=1 – no one got selected – 1 got selected No one got selected = $(1-0.4) \times (1-0.5) \times (1-0.6) \times (1-0.8) = 0.024$ 1 got selected= $0.4 \times ((1-0.5) \times (1-0.6) \times (1-0.8)) + 0.5 \times ((1-0.4) \times (1-0.5) \times (1-0.8)) + 0.8 \times ((1-0.4) \times (1-0.5) \times (1-0.8)) + 0.8 \times ((1-0.4) \times (1-0.5) \times (1-0.6)) = 0.016 + 0.024 + 0.036 + 0.096 = 0.17$ So, Required probability = 1 - 0.024 - 0.17 = 0.806

3. A basket contains 10 red ball and 15 white ball. out of which 3 red and 4 white balls are damaged. If two balls selected at random, what is the probability that either both are white balls or both are not damaged?
A) 203/435
B) 313/300
C) 317/400
D) 203/300
E) None

View Answer

Option B Solution: | P(A) = 15c2 / 25c2, P(B) = 18c2 / 25c2 $P(A \cap B) = 11c2 / 25c2$ $P(A \cup B) = P(A) + P(B) - P(A \cap B) \Longrightarrow (15c2 / 25c2)+(18c2 / 25c2)-(11c2 / 25c2)+(18c2 / 25c2)-(11c2 / 25c2)=406/600=>203/300$

4. A box contains tickets numbered from 1 to 16. 3 tickets are to be chosen to give 3 prizes. What is the probability that at least 2 tickets contain a number which is multiple of 4?
A) 19/240
B) 11/240
C) 43/250
D) 9/80
E) None

View Answer

Option A Solution:

From 1 to 16, there are 4 numbers which are multiple of 4 1st 2 are multiple of 4, and one any other number from (16-4) = 12 tickets 4c2*12c1/16c3 = 72/5602nd all are multiples of 4. 4c3/16c3=4/560Add both 72/560+4/560=76/560

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- 5. Chance that Sheela tells truth is 35% and for Ramesh is 75%. In what percent they likely to contradict each other in the same question?
 - A) 9/40
 - B) 15/25
 - C) 25/40 D) 23/40
 - E) None

View Answer

Option D

Solution: P(A) = 35/100=7/20 and P(B) = 75/100=3/4. Now they are contradicting means one lies and other speaks truth. So, Probability = 7/20*1/4 + 13/20 * 3/4=7/80+39/80=46/80=23/40

- 6. Two dice are thrown simultaneously. What is the probability of getting the sum of the numbers as even?
 - A) 1/3
 - B) 2/3
 - C) 1/2
 - D) 3/4
 - E) None

View Answer

Option C Solution: Throw two dice n(s)=36E is nos sum is even. Hence E={(1,1),(1,3)(1,5)(2,2),(2,4),(2,6),....(6,2),(6,4),(6,6)} n(E)=18Thus required probability= 18/36= 1/2

7. A basket contains 8 Red and 6 Pink toys. There is another basket which contains 7 Red and 8 Pink toys. One toy is to drawn from either of the two baskets. What is the probability of drawing a Pink toys? A) 101/210 B) 85/156 C) 75/210 D) 120/156 E) None

View Answer

Option A Solution: Probability of one basket =1/21st Basket Pink toy probability $=1/2^*$ (6c1/14c1) 2nd Basket Pink toy probability $= 1/2^*$ (8c1/15c1) Adding both ($1/2^*6/14$) + ($1/2^*4/15$) 3/14+4/15=101/210

- 8. Four persons are chosen at random from a group of 3 men, 5 women and 4 children. What is the probability of exactly two of them being men?
 - A) 10/60
 B) 12/55
 C) 25/60
 D) 13/60
 E) None

View Answer

Option B Solution: Total People = 3 + 5 + 4 = 12n(s)=12c4Probability of exactly two men and two from others N(e) = 3c2*9c2 $\Rightarrow P = (3c2*9c2)/12c4 => 12/55$

- 9. A box contains 3 ballons of 1 shape, 4 ballons of 1 shape and 5 ballons of 1 shape. Three ballons of them are drawn at random, what is the probability that all the three are of different shape?
 A) 3/44
 B) 5/22
 - B) 5/22C) 3/11D) 10/22E) None

View Answer

Option C Solution: Total=3+4+5=12 n(s)=12c3=220 n(e)=3c1 * 4c1 * 5c1 =60 p=60/220=3/11

- 10. 12 persons are seated around a round table. What is the probability that two particular persons sit together?A) 2/11B) 4/21
 - D) 4/2
 - C) 8/21
 - D) 6/21
 - E) None

View Answer

Option A Solution:

In a circle of n different persons, the total number of arrangements possible = (n - 1)!n(S) = (12 - 1) = 11 !Taking two persons as a unit, total persons = 11

Therefore no. of ways for these 11 persons to around the circular table = (11 - 1)! = 10!

In any unit, 2 particular person can sit in 2! ways.

Hence total number of ways that any three person can sit,

=n(E) = 10! * 2!

Therefore P (E) = probability of three persons sitting together = n(E) / n(S)= (10! * 2!)/11! = 2/11.

- 1. A bag contains 6 red, 2 blue and 4 green balls. 3 balls are chosen at random. What is the probability that at least 2 balls chosen will be red?
 - A) 2/7
 - B) 1/2
 - C) 1/3
 - D) 2/5
 - E) 3/7

View Answer

Solution: There will be 2 cases Case 1: 2 red, 1 blue orgreen Prob. = ${}^{6}C_{2} \times {}^{6}C_{1} / {}^{12}C_{3} = 9/22$ Case 2: all 3 red Prob. = ${}^{6}C_{3} / {}^{12}C_{3} = 2/22$ Add the cases, required prob. = 9/22 + 2/22= 11/22 = 1/2

- 2. Tickets numbered 1 to 250 are in a bag. What is the probability that the ticket drawn has a number which is a multiple of 4 or 7?
 A) 83/250
 B) 89/250
 C) 77/250
 D) 93/250
 - E) 103/250

View Answer

Option B

Solution: Multiples of 4 up to 120 = 250/4 = 62Multiples of 7 up to 120 = 250/7 = 35 (take only whole number before the decimal part) Multiple of 28 (4×7) up to 250 = 250/28 = 8So total such numbers are = 62 + 35 - 8 = 89So required probability = 89/250

3. From a deck of 52 cards, 3 cards are chosen at random. What is the probability that all are face cards?
A) 14/1105
B) 19/1105
C) 23/1105
D) 11/1105

E) 26/1105

View Answer

Option D

Solution: There are 3*4 = 12 face cards in 52 cards So required probability $= {}^{12}C_3 / {}^{52}C_3 =$ 11/1105

4

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- 4. One 5 letter word is to be formed taking all letters S, A, P, T and E. What is the probability that this the word formed will contain all vowels together?
 - A) 2/5
 - B) 3/10C) 7/12
 - D) 3/5
 - E) 5/12

View Answer

Option A Solution: Total words that can be formed is 5! = 120Now vowels together: Take: S, P, T and AE So their arrangement is 4! * 2! = 48So required probability = 48/120 = 2/5

- One 5-digit number is to be formed from numbers – 0, 1, 3, 5, and 6 (repetition not allowed). What is the probability that number formed will be even?
 - A) 8/15
 - B) 7/16
 - C) 7/15
 - D) 3/10 E) 13/21

View Answer

Option B

Solution: Two cases: Case 1: 0 at last place So 4 choices for 1st digit, 3 for 2nd, 2 for 3rd and 1 for 4th. So numbers = 4*3*2*1 =24 Case 2: 6 at last place For 5-digit number 0 cannot be placed at 1st place or cannot be 1st digit So 3 choices (1, 3, 5) for 1st digit, 3 for 2nd, 2 for 3rd and 1 for 4th. So numbers =3*3*2*1 = 18 So total choices = 24+18 = 42Number total 5-digit numbers that can be formed from 0, 1, 3, 5, and 6 0 not allowed at 1st place, so 4 choices for 1st place, 4 for 2nd, 3 for 3rd, 2 for 4th and 1 for 5th. Sp total = 4*4*3*2*1 = 96So required probability = 42/96 = 7/16

Directions (6-8): There are 3 bags containing 3 colored balls – Red, Green and Yellow. Bag 1 contains:

24 green balls. Red balls are 4 more than blue balls. Probability of selecting 1 red ball is 4/13

Bag 2 contains:

Total balls are 8 more than 7/13 of balls in bag 1. Probability of selecting 1 red ball is 1/3. The ratio of green balls to blue balls is 1:2

Bag 3 contains:

Red balls equal total number of green and blue balls in bag 2. Green balls equal total number of green and red balls in bag 2. Probability of selecting 1 blue ball is 3/14.

6. 1 ball each is chosen from bag 1 and bag 2, What is the probability that 1 is red and other blue?
A) 15/128
B) 21/115
C) 17/135
D) 25/117
E) 16/109

View Answer

Option D Solution: Let red = x, so blue = x-4 So x/(24+x+(x-4)) = 4/13Solve, x = 16So bag 1: red = 16, green = 24, blue = 12 NEXT: bag 2: total = 8 + 7/13 * 52 = 36green and blue = y and 2y. Let red balls = zSo z + y + 2y = 36....(1) Now Prob. of red = 1/3So z/36 = 1/3Solve, z = 12From (1), y = 8So bag 2: red = 12, green = 8, blue = 16 NEXT: bag 3: red = 8+16 = 24, green = 12+8 = 20Blue prob. = 3/14So a/(24+20+a) = 3/14Solve, a = 12So bag 3: red = 24, green = 20, blue = 12 Now probability that 1 is red and other

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blue::

16/52 * 16/36 + 12/52 * 12/36 = 25/117

- Some green balls are transferred from bag 1 to bag 3. Now probability of choosing a blue ball from bag 3 becomes 3/16. Find the number of remaining balls in bag 1.
 - A) 60 B) 58
 - C) 52
 - D) 48
 - D) 40
 - E) 44

View Answer

Option E

Solution: blue balls in bag 3 are 12 Let x green balls are transferred. So 12/(56+x) = 3/16 [56 was number of bags in bag 3 before transfer] Solve, x = 8 So remaining number of balls in bag 1 = 52-8 = 44

- 8. Green balls in ratio 4 : 1 from bags 1 and 3 respectively are transferred to bag 4. Also 4 and 8 red balls from bags 1 and 3 respectively. Now probability of choosing green ball from bag 4 is 5/11. Find the number of green balls in bag 4?
 A) 12
 - B) 15
 - C) 10
 - D) 9
 - E) 11

View Answer

Option C

Solution: 4x and x = 5x green balls 4+8 = 12 red balls 5x/(5x+12) = 5/11Solve, x = 25*2 = 10 green balls

Directions (9-10): There are 3 people – A, B and C. Probability that A speaks truth is 3/10, probability that B speaks truth is 3/7 and probability that C speaks truth is 5/6. For a particular question asked, at most 2 people speak truth. All people answer to a particular question asked.

- 9. What is the probability that B will speak truth for a particular question asked?
 A) 7/18
 B) 14/33
 C) 4/15
 - D) 9/28
 - E) 10/33

View Answer

Option D

Solution: In any case B speaks truth. Now at most 2 people speak truth for 1 question So case 1: B and A speaks truth Probability = 3/7 * 3/10 * (1-5/6) = 3/140Case 2: B and C speaks truth Probability = 3/7 * (1 - 3/10) * 5/6 = 5/20Case 3: Only B speaks truth Probability = 3/7 * (1 - 3/10) * (1-5/6) = 1/20Add the three cases = 6/20 + 3/140 = 100

45/140 = 9/28

10. A speaks truth only when B does not speak truth, then what is the probability that C does not speak truth on a question?
A) 11/140
B) 21/180
C) 22/170
D) 13/140
E) None of these

View Answer

Option A

Solution: Case 1: B does not speak truth, A speaks truth So A speaks truth here Probability that C does not speak truth = 3/10 * (1 - 3/7) * (1 - 5/6) = 1/35Case 2: B speaks truth So A does not speak truth here Probability that C does not speak truth = (1 - 3/10) * 3/7 * (1 - 5/6) = 1/20So total = 1/35 + 1/20 = 11/140

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- There are 100 tickets in a box numbered 1 to 100. 3 tickets are drawn at one by one. Find the probability that the sum of number on the tickets is odd.
 - A) 2/7
 - B) 1/2C) 1/3
 - D) 2/5
 - E) 3/7

View Answer

Option B

Solution: There will be 4 cases Case 1: even, even, odd Prob. = $1/2 \times 1/2 \times 1/2$ Case 2: even, odd, even Prob. = $1/2 \times 1/2 \times 1/2$ Case 3: odd, even, even Prob. = $1/2 \times 1/2 \times 1/2$ Case 4: odd, odd, odd Prob. = $1/2 \times 1/2 \times 1/2$ Add all the cases, required prob. = 1/2

- There are 4 green and 5 red balls in first bag. And 3 green and 5 red balls in second bag. One ball is drawn from each bag. What is the probability that one ball will be green and other red?
 - A) 85/216
 B) 34/75
 C) 95/216
 D) 35/72
 - E) 13/36

View Answer

Option D Solution: Case 1:first green, second red Prob. = $4/9 \times 5/8 = 20/72$ Case 2:first red, second green Prob. = $5/9 \times 3/8 = 15/72$ Add the two cases

3. A bag contains 2 red, 4 blue, 2 white and 4 black balls. 4 balls are drawn at random, find the probability that at least one ball is black.

A) 85/99
B) 81/93
C) 83/99
D) 82/93
E) 84/99

View Answer

Option A Solution: Prob. (At least 1 black) = 1 – Prob. (None black) So Prob. (At least 1 black) = $1 - ({}^{8}C_{4}/{}^{12}C_{4})$ = 1 - 14/99

- 4. Four persons are chosen at random from a group of 3 men, 3 women and 4 children. What is the probability that exactly 2 of them will be men?
 A) 1/9
 B) 3/10
 C) 4/15
 D) 1/10
 - D) 1/10 E) 5/12

View Answer

Option B

Solution: 2 men means other 2 woman and children So prob. = ${}^{3}C_{2} \times {}^{7}C_{2} / {}^{10}C_{4} = 3/10$

5. Tickets numbered 1 to 120 are in a bag. What is the probability that the ticket drawn has a number which is a multiple of 3 or 5?
A) 8/15
B) 5/16
C) 7/15
D) 3/10

E) 13/21

View Answer

Option C Solution:

Multiples of 3 up to 120 = 120/3 = 40Multiples of 5 up to 120 = 120/5 = 24 (take only whole number before the decimal

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part)

Multiple of 15 (3×5) up to 120 = 120/15 = 8

So total such numbers are = 40 + 24 - 8 = 56

So required probability = 56/120 = 7/15

6. There are 2 people who are going to take part in race. The probability that the first one will win is 2/7 and that of other winning is 3/5. What is the probability that one of them will win?A) 14/35

B) 21/35

C) 17/35

D) 19/35

- D = 16/25
- E) 16/35

View Answer

Option D

Solution: Prob. of 1st winning = 2/7, so not winning = 1 - 2/7 = 5/7Prob. of 2nd winning = 3/5, so not winning = 1 - 3/5 = 2/5So required prob. = 2/7 * 2/5 + 3/5 * 5/7 = 19/35

- 7. Two cards are drawn at random from a pack of 52 cards. What is the probability that both the cards drawn are face card (Jack, Queen and King)?
 A) 11/221
 B) 14/121
 - C) 18/221
 - D) 15/121
 - E) 14/221

View Answer

Option A Solution:

There are 52 cards, out of which there are 12 face cards. So probability of 2 face cards = ${}^{12}C_2/{}^{52}C_2 = 11/221$

8. A committee of 5 people is to be formed from among 4 girls and 5 boys. What is the

probability that the committee will have less number of boys than girls? A) 7/12 B) 7/15 C) 6/13 D) 5/12 E) 7/13

View Answer

Option D Solution: Case 1: 1 boy and 4 girls Prob. = ${}^{5}C_{1} \times {}^{4}C_{4} / {}^{9}C_{5} = 5/146$

Case 2: 2 boys and 3 girls Prob. = ${}^{5}C_{2\times}{}^{4}C_{3}{}^{9}C_{5} = 40/126$ Add the two cases = 45/126 = 5/12

9. A bucket contains 2 red balls, 4 blue balls, and 6 white balls. Two balls are drawn at random. What is the probability that they are not of same color?
A) 5/11
B) 14/33

C) 2/5 D) 6/11 E) 2/3

View Answer

Option E Solution: Three cases Case 1: one red, 1 blue Prob = ${}^{2}C_{1} \times {}^{4}C_{1} / {}^{12}C_{2} = 4/33$ Case 2: one red, 1 white Prob = ${}^{2}C_{1} \times {}^{6}C_{1} / {}^{12}C_{2} = 2/11$ Case 3: one white, 1 blue Prob = ${}^{6}C_{1} \times {}^{4}C_{1} / {}^{12}C_{2} = 4/11$ Add all cases

10. A bag contains 5 blue balls, 4 black balls and 3 red balls. Six balls are drawn at random. What is the probability that there are equal numbers of balls of each color?
A) 11/77
B) 21/77
C) 22/79
D) 13/57

E) 15/77

View Answer

Option E Solution: ${}^{5}C_{2} \times {}^{4}C_{2} \times {}^{3}C_{2} / {}^{12}C_{6}$

Directions (1-3): An urn contains some balls colored white, blue and green. The probability of choosing a white ball is 4/15 and the probability of choosing a green ball is 2/5. There are 10 blue balls.

- 1. What is the probability of choosing one blue ball?
 - A) 2/7
 - B) 1/4
 - C) 1/3
 - D) 2/5
 - E) 3/7

View Answer

Option C Solution: Probability of choosing one b

Probability of choosing one blue ball = 1 - (4/15 + 2/5) = 1/3

2. What is the total number of balls in the urn?

A) 45

- B) 34
- C) 40
- D) 30
- E) 42

View Answer

Option D

Solution: Probability of choosing one blue ball is 1/3 And total blue balls are 10. So with 10/30 we get probability as 1/3 So total balls must be 30

3. If the balls are numbered 1, 2, up to number of balls in the urn, what is the

probability of choosing a ball containing a multiple of 2 or 3? A) 3/4 B) 4/5 C) 1/4 D) 1/3 E) 2/3

View Answer

Option E Solution:

There are 30 balls in the urn. Multiples of 2 up to 30 = 30/2 = 15Multiples of 3 up to 30 = 30/3 = 10 (take only whole number before the decimal part) Multiples of 6 (2×3) up to 30 = 30/6 = 5So total such numbers are = 15 + 10 - 5 = 20So required probability = 20/30 = 2/3

- 4. There are 2 brothers A and B. Probability that A will pass in exam is 3/5 and that B will pass in exam is 5/8. What will be the probability that only one will pass in the exam?
 A) 12/43
 B) 19/40
 - C) 14/33D) 21/40E) 9/20

View Answer

Option B

Solution:

Only one will pass means the other will fail Probability that A will pass in exam is 3/5. So Probability that A will fail in exam is 1 - 3/5 = 2/5

Probability that B will pass in exam is 5/8. So Probability that B will fail in exam is 1 - 5/8 = 3/8

So required probability = P(A will pass)*P(B will fail) + P(B will pass)*P(A will fail)

So probability that only one will pass in the exam = 3/5 * 3/8 + 5/8 * 2/5 = 19/40

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- 5. If three dices are thrown simultaneously, what is the probability of having a same number on all dices?
 - A) 1/36
 - B) 5/36
 - C) 23/216
 - D) 1/108
 - E) 17/216

View Answer

Option A Solution:

Total events will be 6*6*6 = 216Favorable events for having same number is $\{1,1,1\}$, $\{2,2,2\}$, $\{3,3,3\}$, $\{4,4,4\}$, $\{5,5,5\}$, $\{6,6,6\}$ – so 6 events Probability of same number on all dices is 6/216 = 1/36

6. There are 150 tickets in a box numbered 1 to 150. What is the probability of choosing a ticket which has a number a multiple of 3 or 7?

- A) 52/125
- B) 53/150
- C) 17/50
- D) 37/150
- E) 32/75

View Answer

Option E

Solution: Multiples of 3 up to 150 = 150/3 = 50Multiples of 7 up to 150 = 150/7 = 21 (take only whole number before the decimal part) Multiples of 21 (3×7) up to 150 = 150/21 =7

So total such numbers are = 50 + 21 - 7 = 64

So required probability = 64/150 = 32/75

7. There are 55 tickets in a box numbered 1 to 55. What is the probability of choosing a ticket which has a prime number on it?
A) 3/55
B) 5/58

C) 8/21 D) 16/55 E) 4/13

View Answer

Option D Solution:

Prime numbers up to 55 is 16 numbers which are 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 43, 41, 47, 53. So probability = 16/55

8. A bag contains 4 white and 5 blue balls. Another bag contains 5 white and 7 blue balls. What is the probability of choosing two balls such that one is white and the other is blue?
A) 61/110
B) 59/108
C) 45/134
D) 53/108
E) 57/110

View Answer

Option D

Solution: Case 1: Ball from first bag is white, from another is blue So probability = 4/9 * 7/12 = 28/108Case 1: Ball from first bag is blue, from another is white So probability = 5/9 * 5/12 = 25/108Add the cases So required probability = 28/108 + 25/108= 53/108

9. The odds against an event are 2 : 3 and the odds in favor of another independent event are 3 : 4. Find the probability that at least one of the two events will occur.A) 11/35

B) 27/35C) 13/35D) 22/35

E) 18/35

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Option B Solution:

Let 2 events A and B Odds against A are 2 : 3 So probability of occurrence of A = 3/(2+3)= 3/5. And non-occurrence of A = 2/5Odds in favor of B are 3:4 So probability of occurrence of B = 3/(3+4)= 3/7. And non-occurrence of B = 4/7Probability that at least one occurs Case 1: A occurs and B does not occur So probability = 3/5 * 4/7 = 12/35Case 2: B occurs and A does not occur So probability = 3/7 * 2/5 = 6/35Case 3: Both A and B occur So probability = 3/5 * 3/7 = 9/35So probability that at least 1 will occur = 12/35 + 6/35 + 9/35 = 27/35

- 10. The odds against an event are 1 : 3 and the odds in favor of another independent event are 2 : 5. Find the probability that one of the event will occur.
 - A) 17/28
 - B) 5/14
 - C) 11/25
 - D) 9/14
 - E) 19/28

View Answer

Option A Solution:

Let 2 events A and B Odds against A are 1 : 3 So probability of occurrence of A = 3/(1+3)= 3/4. And non-occurrence of A = 1/4Odds in favor of B are 2 : 5 So probability of occurrence of B = 2/(2+5)= 2/7. And non-occurrence of B = 5/7Case 1: A occurs and B does not occur So probability = 3/4 * 5/7 = 15/28Case 2: B occurs and A does not occur So probability = 2/7 * 1/4 = 2/28So probability that one will occur = 15/28 + 2/28 = 17/28

From a pack of 52 cards, 1 card is chosen at random. What is the probability of the card being diamond or queen?

- A) 2/7 B) 6/15 C) 4/13
- D) 1/8
- E) 17/52

View Answer Option C

Solution:

In 52 cards, there are 13 diamond cards and 4 queens.

1 card is chosen at random For 1 diamond card, probability = 13/52For 1 queen, probability = 4/52

For cards which are both diamond and queen, probability = 1/52

So required probability = 13/52 + 4/52 - 1/52 = 16/52 = 4/13

From a pack of 52 cards, 1 card is drawn at random. What is the probability of the card being red or ace?
 A) 5/18

- B) 7/13
- C) 15/26
- D) 9/13
- E) 17/26

View Answer Option B Solution:

In 52 cards, there are 26 red cards and 4 ace and there 2 such cards which are both red and ace. 1 card is chosen at random For 1 red card, probability = 26/52For 1 ace, probability = 4/52For cards which are both red and ace, probability = 2/52So required probability = 26/52 + 4/52 - 2/52 = 28/52 = 7/13

□ There are 250 tickets in an urn numbered 1 to 250. One ticket is chosen at random. What is the probability of it being a number containing a multiple of 3 or 8?

A) 52/125 B) 53/250 C) 67/125 D) 101/250 E) 13/25

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View Answer Option A Solution:

Multiples of 3 up to 250 = 250/3 = 83 (take only whole number before the decimal part) Multiples of 8 up to 250 = 250/3 = 31Multiples of 24 (3×8) up to 250 = 250/24 = 10So total such numbers are = 83 + 31 - 10 = 104So required probability = 104/250 = 52/125

□ There are 4 white balls, 5 blue balls and 3 green balls in a box. 2 balls are chosen at random. What is the probability of both balls being non-blue?

A) 23/66
B) 5/18
C) 8/21

D) 7/22

E) 1/3

View Answer Option D Solution:

Both balls being non-blue means both balls are either white or green There are total 12 balls (4+3+5) and total 7 white + green balls. So required probability = ${}^{7}C_{2}/{}^{12}C_{2} = [(7*6/2*1)/(12*11/2*1)] = 21/66 = 7/22$

□ There are 4 white balls, 3 blue balls and 5 green balls in a box. 2 balls are chosen at random. What is the probability that first ball is green and second ball is white or green in color? A) 1/3

B) 5/18
C) 1/2
D) 4/21
E) 11/18

View Answer Option B Solution:

There are total 4+3+5 = 12 balls Probability of first ball being green is = 5/12Now total green balls in box = 5 - 1 = 4So total white + green balls = 4 + 4 = 8So probability of second ball being white or green is 8/12 = 2/3So required probability = 5/12 * 2/3 = 5/18 \Box 2 dices are thrown. What is the probability that there is a total of 7 on the dices?

A) 1/3

B) 2/7

C) 1/6

D) 5/36

E) 7/36

View Answer Option C Solution:

There are 36 total events which can happen $(\{1,1), \{1,2\}, \dots, \{6,6\})$ For a total of 7 on dices, we have $-\{1,6\}, \{6,1\}, \{2,5\}, \{5,2\}, \{3,4\}, \{4,3\} - \text{so 6 choices}$ So required probability = 6/36 = 1/6

□ 2 dices are thrown. What is the probability that sum of numbers on the two dices is a multiple of 5?

- A) 5/6
 B) 5/36
 C) 1/9
 D) 1/6
- E) 7/36

View Answer Option E

Solution:

There are 36 total events which can happen $(\{1,1), \{1,2\}, \dots, \{6,6\})$ For sum of number to be a multiple of 5, we have $-\{1,4\}, \{4,1\}, \{2,3\}, \{3,2\}, \{4,6\}, \{6,4\}, \{5,5\}$ – so 7 choices So required probability = 7/36

□ There are 25 tickets in a box numbered 1 to 25. 2 tickets are drawn at random. What is the probability of the first ticket being a multiple of 5 and second ticket being a multiple of 3.

A) 5/11
B) 1/4
C) 2/11
D) 1/8

E) 3/14

View Answer Option D Solution: There are 5 tic

There are 5 tickets which contain a multiple of 5 So probability of 1st ticket containing multiple

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of 5 = 5/25 = 1/5 Now:

Case 1: If the ticket chosen contained 15

If there was a 15 on first draw, then there are 7 tickets in box which contain a multiple of 3 out of 24 tickets. (25/3 - 1 = 8 - 1 = 7) – because 15 is already out from the box

So probability = 7/24 (24 tickets remaining after 1st draw)

Case 2: If the ticket chosen contained other than 15 (5 or 10 or 20 or 25)

If 15 was not there on first draw, then there are 8 tickets in box which contain a multiple of 3 out of 24 tickets. (25/3 = 8) – because 15 is already out from the box

So probability = 8/24 (24 tickets remaining after 1st draw)

Add the cases for probability of multiple of 3 on second ticket, so prob. = 7/24 + 8/24 = 15/24 (added the cases because we want one of these cases to happen and not both)

So required probability = 1/5 * 15/24 = 1/8(multiplied the cases because we want both to happen)

□ What is the probability of selecting a two digit number at random such that it is a multiple of 2 but not a multiple of 14?

A) 17/60

B) 11/27

C) 13/30

D) 31/60

E) 17/30

View Answer Option C Solution:

There are 90 two digit numbers (10-99) Multiple of 2 = 90/2 = 45Multiple of 14 = 90/14 = 6Since all multiples of 14 are also multiple of 2, so favorable events = 45 - 6 = 39So required probability = 39/90 = 13/30

□ There are 2 urns. 1st urn contains 6 white and 6 blue balls. 2nd urn contains 5 white and 7 black balls. One ball is taken at random from first urn and put to second urn without noticing its color. Now a ball is chosen at random from 2nd urn. What is the probability of the second

ball being a white colored ball?

A) 11/13

B) 6/13

C) 5/13

D) 5/12

E) 11/12

View Answer Option A Solution:

Case 1: first was a white ball

Now it is put in second urn, so total white balls in second urn = 5+1 = 6, and total balls in

second urn = 12 + 1 = 13

So probability of white ball from second urn = 6/13

Case 2: first was a blue ball

Now it is put in second urn, so total white balls in second urn remain 5, and total balls in second urn = 12+1 = 13

So probability of white ball from second urn = 5/13

So required probability = 6/13 + 5/13 = 11/13(added the cases because we want one of these cases to happen and not both)

A card from a pack of 52 cards is lost. From the remaining cards of the pack, two cards are drawn and are found to be both hearts. Find the Probability of the lost card being a heart?

A. 12/50B. 8/50C. 11/50D. 9/50E. None of these Answer & Explanation Answer – C. 11/50Explanation : Total cards = 52Drawn cards(Heart) = 2 Present total cards = tota

Present total cards = total cards-drawn cards =52-2=50 Remaining Card 13-2 = 11 Probability = 11/50

□ There are three boxes each containing 3 Pink and 5 Yellow balls and also there are 2 boxes each containing 4 Pink and 2 Yellow balls. A Yellow ball is selected at random.

13

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Find the probability that Yellow ball is from a box of the first group?

A. 42/61

B. 45/61

C. 51/61

D. 52/61

E. None of these

Answer & Explanation Answer – **B. 45/61 Explanation :** Probability = (3/5 * 5/8)/([3/5 * 5/8] + [2/5 *1/3]) = 45/61

□ A fruit basket contains 10 Guavas and 20 Bananas out of which 3 Guavas and 5 Bananas are defective. If two fruits selected at random, what is the probability that either both are Bananas or both are non-defective?

A. 315/435

B. 313/435

C. 317/435

D. 316/435

E. None of these

Answer & Explanation Answer – **D. 316/435 Explanation :** P(A) = 20c2 / 30c2, P(B) = 22c2 / 30c2 $P(A \cap B) = 15c2 / 30c2$ $P(A \cup B) = P(A) + P(B) - P(A \cap B) \Longrightarrow$ (20c2/30c2)+(22c2/30c2)-(15c2/30c2)=316/435

□ A committee of five persons is to be chosen from a group of 10 people. The probability that a certain married couple will either serve together or not at all is?

A. 54/199 B. 52/195 C. 53/186 D. 51/126 E. None of these **Answer & Explanation** Answer - D. 51/126

Explanation :

Five persons is to be chosen from a group of 10 people = 10C5 = 252Couple Serve together = 8C3 * 2C2 = 56Couple does not serve = 8C5 = 56Probability = 102/252 = 51/126

□ Out of 14 applicants for a job, there are 6 women and 8 men. It is desired to select 2

persons for the job. The probability that atleast one of selected persons will be a Woman is?

A. 77/91 B. 54/91 C. 45/91 D. 40/91 E. None of these **Answer & Explanation** Answer – A. 77/91 **Explanation**: Man only = 8C2 = 14Probability of selecting no woman = 14/91Probability of selecting atleast one woman = 1 - 114/91 = 77/91

Three Bananas and three oranges are kept in a box. If two fruits are chosen at random. Find the probability that one is Banana and another one is orange?

A. 1/5 B. 3/5 C. 4/5 D. 2/5 E. None of these **Answer & Explanation** Answer − **B.** 3/5 **Explanation :** Total probability = 6C2 = 15Probability that one is Banana and another one is orange = 3C1 * 3C1 = 9probability = 9/15 = 3/5

A basket contains 6 White 4 Black 2 Pink and 3 Green balls. If three balls picked up random, What is the probability that all three are White?

A. 4/91 B. 5/93 C. 7/97 D. 8/92 **Answer & Explanation** Answer – A. 4/91 **Explanation** : Total Balls = 15Probability = 6c3 / 15c3 = 4/91

A basket contains 6 White 4 Black 2 Pink and 3 Green balls. If three balls are picked at random, what is the probability that two are **Black and one is Green?**

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A. 22/355 B. 15/381 C. 10/393 D. 14/455

E. 18/455

Answer & Explanation Answer – **E. 18/455 Explanation :** Total Balls = 15 Probability = 4c2 * 3c1/ 15c3 = 18/455

□ A basket contains 6 White 4 Black 2 Pink and 3 Green balls. If four balls are picked at random, what is the probability that atleast one is Black? A. 69/91

B. 80/91C. 21/91D. 55/91E. None of these Answer & Explanation Answer – A. 69/91Explanation : Total Balls = 15 Probability = 11c4/15c4 = 22/91One is black = 1 - 22/91 = 69/91

□ A basket contains 6 White 4 Black 2 Pink and 3 Green balls. If two balls are picked at random, what is the probability that either both are Pink or both are Green?

A. 2/105 B. 4/105 C. 8/137 D. 5/137 E. None of these

Answer & Explanation Answer – B. 4/105 Explanation : Probability both are Pink = 1/15C2 Probability both are Green = 3/15C2 Required Probability = 4/15C2 = 4/105

A box contains 27 marbles some are blue and others are green. If a marble is drawn at random from the box, the probability that it is blue is 1/3. Then how many number of green marbles in the box? A. 10

B. 15

C. 14

D. 18 Answer & Explanation Answer – D. 18 Explanation : Blue marble – x xc1/27c1 = 1/3 $x/27=1/3 \longrightarrow x=27/3=9$ No of green marbles = Total – Blue marble =27-9=18

□ In a bag there are 4 white, 4 red and 2 green balls. Two balls are drawn at random.What is the probability that at least one ball is of red colour?

A. 4/3B. 7/3C. 1/3D. 2/3Answer & Explanation Answer – D. 2/3Explanation : Total Balls =10 Other than red ball = 6c2 $6c2/10c2=1/3 \longrightarrow 1-1/3 = 2/3$

□ Sahil has two bags (A & B) that contain green and blue balls.In the Bag 'A' there are 6 green and 8 blue balls and in the Bag 'B' there are 6 green and 6 blue balls. One ball is drawn out from any of these two bags. What is the probability that the ball drawn is blue?

A. 15/28
B. 13/28
C. 17/28
D. 23/28

Answer & Explanation Answer – A. 15/28 Explanation : Total balls in A bag = 14, Total balls in A bag = 12 A bag = 1/2(8c1/14c1) = 2/7B bag = 1/2(6c1/12c1) = 1/4 —> total Probability = 2/7 + 1/4 = 15/28

☐ In an examination, there are three sections namely Reasoning, Maths and English. Reasoning part contains 4 questions. There are 5 questions in maths section and 6 questions in English section. If three questions are selected randomly from the list

of questions then what is the probability that all of them are from maths?

A. 7/91

B. 8/91

C. 2/91 D. 4/91

D. 4/ /1

Answer & Explanation Answer – C. 2/91 Explanation : Total no of questions= 15 Probability = 5c3/15c3 = 2/91

□ A basket contains 5 red 4 blue 3 green marbles. If three marbles picked up random, What is the probability that either all are green or all are red?

A. 1/20 B. 7/20 C. 3/20 D. 9/20

Answer & Explanation Answer – A. 1/20 Explanation : Total Marbles = 12 Either all are green or all are red = 5c3 + 3c3probability = 5c3 + 3c3/12c3 = 11/220 = 1/20

□ A basket contains 5 red 4 blue 3 green marbles. If three marbles picked up random, What is the probability that at least one is blue?

A. 41/55 B. 53/55 C. 47/55 D. 49/55

Answer & Explanation Answer – A. 41/55 Explanation : Total Marbles = 12 other than blue 8c3 / 12c3 = 14/55probability = 1-14/55 = 41/55

□ A basket contains 5 red 4 blue 3 green marbles. If two marbles picked up random, What is the probability that both are red?

A. 4/33 B. 5/33 C. 7/33 D. 8/33

Answer & Explanation

Answer – **B.** 5/33**Explanation :** Total Marbles = 12 Probability = 5c2 / 12c2 = 5/33

□ A bag contains 5 red caps, 4 blue caps, 3 yellow caps and 2 green caps. If three caps are picked at random, what is the probability that two are red and one is green? A. 22/55

A. 22/35B. 15/81C. 10/91D. 5/91Answer & Explanation Answer – D. 5/91Explanation : Total caps = 14 Probability = 5c2 * 2c1/14c3 = 5/91

□ A bag contains 5 red caps, 4 blue caps, 3 yellow caps and 2 green caps. If four caps are picked at random, what is the probability that two are red, one is blue and one is green? A. 22/1001 B. 80/1001 C. 21/1001 D. 55/1001 Answer & Explanation Answer – B. 80/1001 Explanation : Total caps = 14

Probability = 5c2 * 4c1 * 2c1 / 14c4 = 80/1001

□ A bag contains 2 red caps, 4 blue caps, 3 yellow caps and 5 green caps. If three caps are picked at random, what is the probability that none is green?

A. 2/13 B. 3/13 C. 1/13 D. 5/13 Answer & Explanation Answer – B. 3/13

Explanation : Total caps = 14Probability = 5c0 * 9c3/ 14c3 = 3/13

A bag contains 5 red and 7 white balls. Four balls are drawn out one by one and not replaced. What is the probability that they

are alternatively of different colours?

a) 7/99

b) 11/99

c) 14/99

d) 19/99

e) None of these

Answer & Explanation Answer – c) 14/99 Explanation : Balls are picked in two manners – RWRW or

WRWR So probability = (5/12)*(7/11)*(4/10)*(6/9) +

 $(7/12)^{(7/12)}(6/10)^{(4/10)}(6/9)^{(7/12)}(7/12)^{(7/12)}(6/10)^{(6/9)}$

■ P and Q are sitting in a ring with 11 other persons. If the arrangement of 11 persons is at random, then the probability that there are exactly 4 persons between them?

a) 1/3

- b) 1/4
- c) 1/5
- d) 1/6

e) None of these

Answer & Explanation Answer – d) 1/6 Explanation :

Fix the position of P, then Q can be sit in 12 positions, so total possible outcome = 12 Now, exactly 4 persons are sitting between them. This can be done in two ways as shown in figure, so favourable outcomes = 2 So, probability = 2/12 = 1/6

□ 10 persons are seated around a round table. What is the probability that 4 particular persons are always seated together?

a) 1/21
b) 4/21
c) 8/21
d) 11/21
e) None of these

Answer & Explanation Answer – a) 1/21

Explanation :

Total outcomes = (10 - 1)! = 9!Favourable outcomes = 6!*4! (4 person seated together and 6 other persons seated randomly, so they will sit in (7-1)! Ways and those 4 persons can be arranged in 4! ways)

So probability = 1/21

□ A box contains 4 red, 5 black and 6 green balls. 3 balls are drawn at random. What is the probability that all the balls are of same colour?

a) 33/455 b) 34/455 c) 44/455 d) 47/455 e) None of these **Answer & Explanation**

Answer – b) 34/455 Explanation : (4c3 + 5c3 + 6c3)/15c3 = 34/455

□ An apartment has 8 floors. An elevator starts with 4 passengers and stops at 8 floors of the apartment. What is the probability that all passengers travels to different floors?

- a) 109/256
- b) 135/256
- c) 105/256
- d) 95/256
- e) None of these

Answer & Explanation

Answer - c) 105/256

Explanation : Total outcomes = 8*8*8*8

Favourable outcomes = 8*7*6*5 (first person having 8 choices, after that second person have 7 choices and so on) So, probability = 105/256

□ A speak truth in 60% cases and B in 80% cases. In what percent of cases they likely to contradict each other narrating the same incident?
 a) 9/25

b) 7/25 c) 11/25 d) 13/25 e) None of these

Answer & Explanation

Answer – c) 11/25 Explanation : P(A) = 3/5 and P(B) = 4/5. Now they are contradicting means one is telling truth and other telling the lie. So, Probability = (3/5)*(1/5) + (2/5)*(4/5)

□ A box contains 30 electric bulbs, out of which 8 are defective. Four bulbs are chosen

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at random from this box. Find the probability that at least one of them is defective?

a) 432/783

b) 574/783

c) 209/784

d) 334/784

e) None of these

Answer & Explanation Answer – b) 574/783 Explanation : 1 – 22c4/30c4 = 1 – 209/783 = 574/783

□ Two person A and B appear in an interview. The probability of A's selection is 1/5 and the probability of B's selection is 2/7. What is the probability that only one of them is selected?

a) 11/35
b) 12/35
c) 13/35

d) 17/35

e) None of these

Answer & Explanation

Answer – c) 13/35

Explanation :

A selects and B rejects + B selects and A rejects = $(1/5)^*(5/7) + (4/5)^*(2/7) = 13/35$

□ A 4- digit number is formed by the digits 0, 1, 2, 5 and 8 without repetition. Find the probability that the number is divisible by 5. a) 1/5 b) 2/5 c) 3/5 d) 4/5 e) None of these **Answer & Explanation** Answer -b) 2/5**Explanation :** Total possibility = 5*4*3*2Favourable outcomes = 2*4*3*2 (to be divisible by 5 unit digit can be filled with only 0 or 5, so only two possibilities are there, then the remaining can be filled in 4, 3 and 2 ways respectively) so probability = 2/5

□ A bag contains 6 red balls and 8 green balls. 2 balls are drawn at random one by one with replacement. Find the probability that both the balls are green a) 16/49 b) 25/49 c) 12/49 d) 21/49 e) None of these **Answer & Explanation** Answer – a) 16/49 **Explanation :** (8c1)/(14c1) * (8c1)*(14c1) = 16/49

A six-digit is to be formed from the given numbers 1, 2, 3, 4, 5 and 6. Find the probability that the number is divisible by 4. a) 3/17 b) 4/15 c) 4/19 d) 4/17 e) None of these **Answer & Explanation** Answer $-\mathbf{b}$) 4/15**Explanation :** For a number to be divisible by 4, the last two digit should be divisible by 4. So possible cases – 12, 16, 24, 32, 36, 52, 56, 64 (last two digits) So favourable outcomes = 24 + 24 + 24 + 24 + 2424 + 24 + 24 + 24 = 192So p = 192/720 = 4/15

□ A bag contains 6 red balls and 7 white balls. Another bag contains 5 red balls and 3 white balls. One ball is selected from each. Find the probability that one ball is red and one is white? a) 53/104b) 47/104c) 63/104d) 51/104e) None of these Answer & Explanation Answer – a) 53/104Explanation : (6/13)*(3/8) + (7/13)*(5/8) = 53/104

□ A lottery is organised by the college ABC through which they will provide scholarship of rupees one lakhs to only one student. There are 100 fourth year students, 150 third year students, 200 second year students and 250 first year students. What is the probability

that a second year student is choosen.

a) 1/7 b) 2/7

c) 3/7

d) 4/7

e) None of these

Answer & Explanation Answer – b) 2/7Explanation : Second year students = 200 so, P = 200/700 = 2/7

A card is drawn from a pack of 52 cards. The card is drawn at random; find the probability that it is neither club nor queen? a) 4/13
b) 5/13
c) 7/13
d) 9/13
e) None of these

Answer & Explanation
Answer – d) 9/13
Explanation :
1 – [13/52 + 4/52 – 1/52] = 9/13

□ A box contains 50 balls, numbered from 1 to 50. If three balls are drawn at random with replacement. What is the probability that sum of the numbers are odd?

a) 1/2
b) 1/3
c) 2/7
d) 1/5

e) None of these

Answer & Explanation Answer –a) 1/2

Explanation :

There are 25 odd and 25 even numbers from 1 to 50.

Sum will be odd if = odd + odd + odd, odd + even + even, even + odd + even, even + even + odd

$$\begin{split} P &= (1/2)^* (1/2)^* (1/2) + (1/2)^* (1/2)^* (1/2) + \\ (1/2)^* (1/2)^* (1/2) + (1/2)^* (1/2)^* (1/2) \\ &= 4/8 = \frac{1}{2} \end{split}$$

□ From a pack of cards, if three cards are drawn at random one after the other with replacement, find the probability that one is ace, one is jack and one is queen? a) 16/7725 b) 16/5525 c) 18/5524 d) 64/5515 e) None of these **Answer & Explanation** Answer – b) 16/5525 **Explanation :** (4c1 + 4c1 + 4c1)/(52c3)

□ A and B are two persons sitting in a circular arrangement with 8 other persons. Find the probability that both A and B sit together.

a) 1/9
b) 2/7
c) 2/9
d) 2/5
e) None of these

Answer & Explanation Answer – c) 2/9Explanation : Total outcomes = (10 - 1)! = 9!Favourable outcomes = (9 - 1)!*2!So p = 2/9

Find the probability that in a random arrangement of the letter of words in the word 'PROBABILITY' the two I's come together.

a) 2/11 b) 1/11 c) 3/11 d) 4/11 e) None of these **Answer & Explanation** Answer -a) 2/11 **Explanation** : Total outcomes = 111/(2)

Total outcomes = 11!/(2!*2!)favourable outcomes = (10!*2!)/(2!*2!)p = 2/11

□ In a race of 12 cars, the probability that car A will win is 1/5 and of car B is 1/6 and that of car C is 1/3. Find the probability that only one of them won the race.

a) 2/7 b) 7/10 c) 9/10 d) 3/7 e) None of these Answer & Explanation

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Answer – b) 7/10 Explanation : 1/5 + 1/6 + 1/3 = 7/10 (all events are mutually exclusive)

□ A bag contains 3 red balls and 8 blacks ball and another bag contains 5 red balls and 7 blacks balls, one ball is drawn at random from either of the bag, find the probability that the ball is red.

a) 93/264

- b) 95/264
- c) 91/264

d) 97/264

e) None of these

Answer & Explanation Answer – c) 91/264 Explanation : Probability – probability of select

Probability = probability of selecting the bag and probability of selecting red ball $(1/2)^*(3/11) + (1/2)^*(5/12) = 91/264$

A bag contains 5 red balls and 7 blue balls. Two balls are drawn at random without replacement, and then find the probability of that one is red and other is blue.

a) 33/65
b) 35/66
c) 37/66
d) 41/65
e) None of these

Answer & Explanation

Answer – b) 35/66

Explanation :

(First red ball is drawn and then blue ball is drawn) + (first blue ball is drawn and then red ball is drawn) (5/12)*(7/11) + (7/12)*(5/11) = 35/66

 $(5/12)^{*}(7/11) + (7/12)^{*}(5/11) = 35/66$

□ A bag contains 3 red balls and 8 blacks ball and another bag contains 5 red balls and 7 blacks balls, one ball is drawn at random from either of the bag, find the probability that the ball is red.

a) 93/264 b) 95/264 c) 91/264 d) 97/264 e) None of these **Answer & Explanation** Answer -c) 91/264

Explanation :

Probability = probability of selecting the bag and probability of selecting red ball (1/2)*(3/11) + (1/2)*(5/12) = 91/264

□ 12 persons are seated at a circular table. Find the probability that 3 particular persons always seated together.

a) 9/55 b) 7/55 c) 4/55 d) 3/55 e) None of these **Answer & Explanation** Answer – d) 3/55 **Explanation :** total probability = (12-1)! = 11!

Desired probability = (10 - 1)! = 9!So, p = (9! * 3!) / 11! = 3/55

P and Q are two friends standing in a circular arrangement with 10 more people. Find the probability that exactly 3 persons are seated between P and Q.

a) 5/11 b) 4/11 c) 2/11 d) 3/11 e) None of these

Answer & Explanation

Answer – c) 2/11

Explanation :

Fix P at one point then number of places where B can be seated is 11.

Now, exactly three persons can be seated between P and Q, so only two places where Q can be seated. So, p = 2/11

□ A basket contains 5 black and 8 yellow balls. Four balls are drawn at random and not replaced. What is the probability that they are of different colours alternatively. a) 56/429

b) 57/429 c) 61/429 d) 68/429 e) None of these **Answer & Explanation** Answer – a) 56/429 **Explanation :**

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sol=> BYBY + YBYB = (5/13)*(8/12)*(4/11)*(7/10) + (8/13)*(5/12)*(7/11)*(4/10) = 56/429

□ Direction(Q6 – Q8): A bag contains 6 red balls and 8 green balls. Two balls are drawn at random one after one with replacement. What is the probability that-

Both the balls are green

a) 13/49

b) 15/49

c) 16/49

d) 17/49

e) None of these

Answer & Explanation Answer – c) 16/49 Explanation : P = (8/14)*(8/14)

□ First one is green and second one is red

 a) 16/49
 b) 14/49
 c) 11/49
 d) 12/49
 e) None of these

 Answer & Explanation

 Answer - d) 12/49
 Explanation :

 P = (8/14)*(6/14)

Both the balls are red
a) 14/49
b) 9/49

c) 11/49

d) 12/49 e) None of these Answer & Explanation Answer – b) 9/49 Explanation : P = (6/14)*(6/14)

□ Find the probability that in a leap year, the numbers of Mondays are 53?

a) 1/7
b) 2/7
c) 3/7
d) 4/7

e) None of these

Answer & Explanation

Answer – b) 2/7

Explanation :

In a leap year there are 52 complete weeks i.e. 364 days and 2 more days. These 2 days can be SM, MT, TW, WT, TF, FS, and SS. So P = 2/7

A urn contains 4 red balls, 5 green balls and 6 white balls, if one ball is drawn at random, find the probability that it is neither red nor white.

- a) 1/3 b) 1/4
- c) 1/5
- d) 2/3
- e) None of these

Answer & Explanation

Answer – a) 1/3 Explanation : 5c1/15c1 = 1/3