

# Seating Arrangement for SBI PO Mains, IBPS PO Mains and RBI Grade B Exams. 

SA Set No 161

## Directions: Study the following information carefully and answer the questions given beside.

In a room there are three concentric tables placed such that the outermost table is rectangle shaped, the innermost table is square shaped and the table in the middle of these two tables is circle shaped. In the rectangular and square tables, persons can be seated at each of the four corners. The corners are numbered from 1 to 4 in clockwise direction in both the tables. Corner 1 is in North-West direction, corner 2 is in North-East direction, corner 3 is in South-East direction and corner 4 is in South-West direction from the centre respectively. 8 persons from A to H are seated equidistant around the circular table facing towards the centre. All of them are of different ages. Ages are to be considered in absolute numbers only.
$B$ is third to the left of $D$, who is 24 years old. $G$ is 11 years older than $F$, who is on the immediate left of $B$. $C$ is second to the right of the one who is 48 years old. $E$ is the oldest person and is seated adjacent to $B$. $A$ is 3 years younger than $E$ but more than 45 years in age. No one is older than 55 years. E's age is a prime number. B's age is 3 times the age of $C$. A is fourth to the right of $E$. $H$ sits third to the left of $F$, who is 4 years older than C. H's age is the average of the ages of his immediate neighbours.

Another person J came and rolled dice 6 times and every time a different number appeared on the top of dice. Each number has some own conditions according to which the persons are to change their seating arrangement.

1. First time 5 appeared on dice, according to which the person with least prime numbered age (among the given ages) will shift to seat number 3 of the rectangular table and face centre.
2. Second time 3 appeared on dice, which means the youngest person has to move to seat 4 of the square table and face away from the centre.
3. Third time 2 appeared on dice, which shows that the person with the highest even numbered age will shift towards his right and face outside.
4. Fourth time 4 came on dice and it signifies that the oldest person has to sit second to the left of C and face towards centre.
5. Fifth time 1 appeared on dice, according to which the person with the lowest even numbered age has to sit on seat 2 of rectangular table and facing towards the centre.
6. Sixth and the last time 6 appeared on dice, which means the person with highest odd numbered age has to sit at seat 4 of the rectangular table facing towards centre.
7. The above conditions are applicable in the order of the dice being rolled.
8. Position of one person is changed only once.
9. Only the persons sitting around the circular table comes under the purview of the above stated conditions.

## Questions :

1. Who among the following still seated around the circular arrangement after rearrangement?
I. F
II. D
III. B
A. Only II
B. Only I and II
C. Only II and III
D. Only I and III
$E$. None of these
2. What is the position of the oldest person with respect to A after the dice being rolled for third time?
A. Fourth to the left
B. Third to the left
C. Both are on different tables
D. Immediate right
E. None of these
3. What is the sum of the ages of the persons that are seated at seat 2 of rectangular and square table after re-arrangement?
A. 68
B. 42
C. 53
D. 73
E. None of these
4. Find the odd one out?
A. E
B. G
C. H
D. F
E. C
5. What is the position of H with respect to the youngest person in the initial arrangement?
A. Second to the right
B. Third to the right
C. Fourth to the left
D. Immediate right
$E$. None of these

Correct Answers:

| $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ |
| :--- | :--- | :--- | :--- | :--- |
| C | B | D | E | A |

## Common explanation :

## Reference:

In a room there are three concentric tables placed such that the outermost table is rectangle shaped, the innermost table is square shaped and the table in the middle of these two tables is circle shaped. In the rectangular and square tables, persons can be seated at each of the four corners. The corners are numbered from 1 to 4 in clockwise direction in both the tables. 8 persons from A to H are seated equidistant around the circular table facing towards the centre.

## Inference:

With the given information following tables can be prepared.
(1)


Reference:
$B$ is third to the left of $D$, who is 24 years old.
$G$ is 11 years older than $F$, who is on the immediate left of $B$.
$E$ is the oldest person and is seated adjacent to $B$.

## Inference:

The above hints can be placed in the following manner, only circular table is shown until the initial arrangement is completed.


## Reference:

A is 3 years younger than $E$ but more than 45 years in age.
No one is older than 55 years.

E's age is a prime number.
$A$ is fourth to the right of $E$.

## Inference:

Thus as per first three hints, E's age is 53 years and A's age is 50 years.


## Reference:

$C$ is second to the right of the one who is 48 years old.
A is not adjacent to $C$.
$B$ 's age is 3 times the age of $C$.
H sits third to the left of F , who is 4 years older than C .
$G$ is 11 years older than $F$, who is on the immediate left of $B$.
H 's age is the average of the ages of his immediate neighbors.

## Inference:

As per first two hints, $C$ must be second to the right of $B$, who is 48 years old.
H 's age would be average of 50 and 24 i.e. 37 years.
Thus the circular seating arrangement can be obtained in the following manner.


## Reference:

1. First time 5 appeared on dice, according to which the person with least prime numbered age (among the given ages) will shift to seat number 3 of the rectangular table and face centre.
2. Second time 3 appeared on dice, which means the youngest person has to move to seat 4 of the square table and face away from the centre.
3. Third time 2 appeared on dice, which shows that the person with the highest even numbered age will shift
towards his right and face outside.
4. Fourth time 4 came on dice and it signifies that the oldest person has to sit second to the left of $C$ and face towards centre.
5. Fifth time 1 appeared on dice, according to which the person with the lowest even numbered age has to sit on seat 2 of rectangular table and facing towards the centre.
6. Sixth and the last time 6 appeared on dice, which means the person with highest odd numbered age has to sit at seat 4 of the rectangular table facing towards centre.
7. The above conditions are applicable in the order of the dice being rolled.
8. Position of one person is changed only once.
9. Only the persons sitting around the circular table comes under the purview of the above stated conditions.

## Inference:

After first turn , the person with least prime numbered age is $G(31)$, so $G$ will sit at seat 3 of rectangular table facing towards centre. Now we have only 7 persons left on circular table.

After second turn, the youngest person i.e. c (16) will move to seat 4 of square table and face away from centre. Now we have only 6 persons left on circular table.

After third turn, the person with highest even numbered age i.e. A (50) will shift towards his right in the same table and face away from centre. Now we have only 6 persons left on circular table.

After fourth turn, the oldest person i.e. E has to sit second to the left of $C$, which is currently on square table, so E will also sit on square table. Now we have only 5 persons left on circular table.

After fifth turn, the person with lowest even numbered age on the circular table is F . So, F will sit on seat 2 of rectangular table facing away from centre. Now we have only 4 persons left on circular table.

After sixth turn, the person with highest odd number age i.e. H has to sit on seat 4 of rectangular table.


## Answers:

1. From common explanation, we have

Only II and III i.e. D and B are seated in circular table even after rearrangement.
Hence option C is correct.
2. From common explanation, we have
$F$ (oldest person) is third to the left of $A$ after rolling the dice for third time.

Hence option B is correct.
3. From common explanation, we have
$\mathrm{F}(20)$ sits at seat 2 of rectangular table and $\mathrm{E}(53)$ sits at seat 2 of square table.

Required sum $=73$

Hence option D is correct.
4. From common explanation, we have

C is the odd one out as rest persons face towards the centre.

Hence option E is correct.
5. From common explanation, we have

H is second to the right of the youngest person in the initial arrangement.

Hence option A is correct.

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