Concept 1: Linear arrangements: Linear arrangement is the arrangement of given items with the help of the given clues. The main idea here is to represent the given data in an organized manner. Once that is done, solving individual problems becomes very easy.
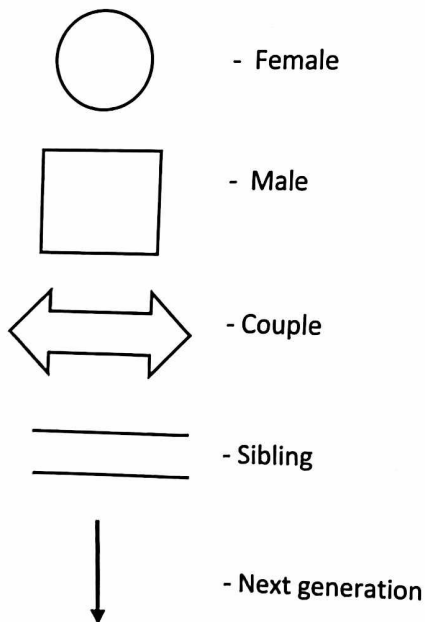
Concept 2: Circular arrangements: Questions on circular arrangements involve arrangement of people sitting around a table or arrangement of things in a circular manner.

In case of people sitting around a table, the table could be of any shape– rectangular, square, circular, etc. Circular arrangement is different from linear arrangement in that there is no first or last position and hence there is no reference point. Therefore, the positions taken by the objects are only relative to each other.

Once you read the question, first draw the shape specified in the question and then draw the slots for the arrangement. Then solve the given clues one by one.

Concept 3: Distribution: In this type of problems, we have to match two or more variables. These questions typically contain clues to club one object (variable) to another in either one-to-one mapping or one-to-many mapping.

Concept 4: Blood relations: Blood relation is one of the most often asked logical reasoning topics. A set of clues are given to determine the blood relationship between individuals in questions. Similar to data arrangement, once the given set of data is represented in an organized manner, these questions can be cracked in almost no time. The following symbols help in representing the given clues so as to solve the problems easily.

- ⃝ - Female
- ▢ - Male
- ⬌ - Couple
- ═ - Sibling
- ↓ - Next generation

Drill

1. A Read the following information and answer the questions below:

Six swimmers A, B, C, D, E and F compete in a race. The outcome is as follows:

- Exactly 2 swimmers finish ahead of B.
- Only two swimmers separate E and D.
- A is behind D and E.
- B is ahead of E, with one swimmer in-between.
- F is ahead of D.

(i) Who stood fifth in the race?

a. A   b. B   c.C   d.D   e.E

(ii) How many swimmers separate A and F?

a. 1   b.2   c.3   d.4   e. Can't determine

2. P, Q, R, S, T, U, V and W are sitting in a circle and are facing centre. Following information is also known:

- P is second to the right of T, who is the neighbour of R and V.
- S is not the neighbour of P.
- V is the neighbour of U.
- Q is not between S and W.
- W is not between U and S.

(i) Which of the following pairs are not neighbours?

a. RV   b. UV   c. RP   d. QW

(ii) Who is to the immediate right of V?

a. P   b. U   c. R   d. T

3. Each of the four persons A, B, C and D wear a different coloured shirt- red, pink, blue and white. A has a red shirt and D does not have a pink shirt. C wears a white shirt. Match the shirt colours with the right persons.

4. In a family of 3 generations, there are two couples and two pairs of brothers and sisters. We also know that,

- Neeta is the sister-in-law of Leena.
- Geeta is the daughter of Jai.
- Jyotsna and Rajesh is the eldest couple in the family.
- Jagdish is the son of Leena.
- Jai is the son of Rajesh and his wife is Leena.

Based on the given information, answer the following questions.

(i) Leena is the _____ of Rajesh?

a. Aunt   b. Sister   c. Daughter-in-law   d. Daughter

(ii) Who is the aunt of Jagdish?

a. Leena   b.Geeta   c. Jyotsna   d. Neeta

Concept review questions

1. Four girls are sitting on a bench to be photographed. Shikha is to the left of Reena. Manju is to the right of Reena. Rita is between Reena andManju. Who would be second from the left in the photograph?

a. Reena   b. Shikha   c. Manju   d. Rita

2. There are five different houses, P to T in a row. P is to the right of Q. T is to the left of R and right of P. Q is to the right of S. Which house is in the middle?

a. P   b. R   c. S   d. T

3. A, B, C, D, E and F are seated in a circle facing the centre. A and C are seated adjacent to each other and E and B are also adjacent to each other. B is to the immediate left of F. There

are 2 persons between D and E.A is not seated adjacent to E. Who is to the immediate left of E?

a. C   b. B   c. F   d. Cannot be determined

4. Five girls are sitting in a row; Rashi is not adjacent to Sulekha or Abha.Anuradha is not adjacent to Sulekha. Rashi is adjacent to Monika.Monika is in the middle of the row. Who is adjacent to Anuradha?

a. Rashi   b. Sulekha

c. Abha   d. Cannot be determined

5. In a march past, seven persons are standing in a row. Q is standing leftof R but right of P. O is standing right of N and left of P. S is standingright of R and left of T. Find out who is standing in the middle.

a. P   b. Q   c. T   d. O

Directions for questions 6 to 10: The questions are based on the following information:

There are six dishes P through U, among which two are starters, two are main course dishes and two are desserts. They are arranged in a circularorder.

- P is adjacent to U.
- R is not adjacent to either Q or T.
- S is a main course and is adjacent to the desserts.
- Both the starters are adjacent to each other.
- P is opposite a dessert which is not Q.

6. Which dish is opposite to T?

a. P   b. Q   c. R   d. S

7. Which of the following is a correct combination?

a. Q dessert   b. U main course

c. U starter   d. Q starter

8. Which of the following is true?

a. One of the desserts is opposite to a main course
b. A main course is opposite to a starter
c. P is a starter
d. More than one of the above.

9. Which dishes are adjacent to B?

a. P and R

c. S and U   b. T and U

                        d. T and P

10. Which of the following dishes cannot be together?

a. P and T

c. U and Q   b. S and T

                        d. P and R

Directions for questions 11 to 12: The questions are based on the following statements.

- Rajinder and Surinder are the sons of Mrs. and Mr. Maudgil.
- Seeta is the sister of Surinder.
- Renu, Raja and Sunil are children of Mrs. and Mr. Bhaskar.
- Sunil and Seeta are married and Ashok and Sanjay are their children.

- Geeta and Rakesh are children of Mrs. and Mr. Jain.
- Geeta is married to Surinder and has three children named Rita,
- Sonu and Raju.

11. How is Rajinder related to Raju?

a. Brother   b. Uncle

c. Brother-in-law   d. Maternal uncle

12. How is Rajinder related to Ashok?

a. Brother-in-law   b. Father-in-law

c. Cousin   d. Uncle

13. On seeing a photograph of a boy, a man said, "He is the son of the only son of my mother." How is the man related to that boy?

a. Brother   b. Uncle

c. Cousin   d. Father

14. Rama told Lakshmana, 'Yesterday, I met the only brother of the daughterof my grandmother.' Whom did Rama meet?

a. Uncle   b. Father

c. Father-in-law   d. Either a or b

15. Pointing to a photo, Mr. Bean said: I have no brother or sister but that fellow's father is my father's son. Whose photo is it?

a. His nephew's   b. His son's

c. His father's   d. His Uncle's

Directions for questions 16 to 20: Six persons A, B, C, D, E and F are sitting in two rows, three in each. E is not at the end of any row. D is second to the left of F. C the neighbour of E, is sitting diagonally opposite to D. B is the neighbour of F.

16. Which of the following are sitting diagonally opposite to each other?

a. F and C   b. D and A

c. A and C   d. A and F

17. Who is facing B?

a. A   b. C

c. D   d. E

18. Which of the following are in the same row?

a. A and E   b. A and B

c. C and B   d. E and D

19. Which of the following are in one of the two rows?

a. FBC   b. CEB

c. DBF   d. AEF

20. After interchanging seats with E, who will be the neighbours of D in the new position?

a. C and A   b. F and B

c. Only B   d. Only A