

## LOGICAL REASONING

### Linear Arrangement

**QLA1.** Six friends went on a vacation to a hill station. They are to be accommodated in a row of nine cottages, each to a cottage. Mohan, Tanya and Roma do not want to live in a cottage at the end of the row. Babu and Mohan must not have anybody adjacent to their cottages. There is only an empty cottage between Mohan and Roma. Chander is adjacent to both Jayanthi and Roma. Tanya is next to the cottage at the beginning.

**QA. Who has empty cottages on both sides?**

- A. Roma      B. Babu      C. Mohan      D. Tanya

**QB. Who is in the third cottage?**

- A. Jayanthi      B. Chander      C. Nobody      D. Roma

**QC. Which cottages are empty?**

- A. 1, 6, 8      B. 1, 5, 8      C. 4, 5, 6      D. 5, 6, 8

**QD. What is the maximum number of consecutive cottages that are occupied?**

- A. 2      B. 3      C. 1      D. 4

**Solution:**

1	2	3	4	5	6	7	8	9
-	T	J	C	R	-	M	-	B

**QLA2:** Refer to the data below and answer the questions that follow.

A shopkeeper placed the seven models of refrigerators of different companies viz., Godrej, Allwyn, Kelvinator, L.G., Whirlpool, Videocon and BPL in a row such that

1. Godrej was immediate left of BPL
2. BPL was fourth to the left of Kelvinator.
3. L.G. Refrigerator was between Allwyn and Videocon.
4. Kelvinator, which was third to the right of Allwyn was at one of the ends.

**QA. Which of the following is correct position of Whirlpool?**

- A. Immediate right of Godrej.      B. Immediate left of Videocon.  
C. Between Videocon and BPL.      D. Fourth to the left of L.G.

**QB. Which one of the following is definitely true?**

- A. BPL is between Allwyn and Kelvinator.      B. Godrej is to the immediate right of Whirlpool.  
C. BPL is to immediate left of Godrej.      D. L.G. Is the fourth to the left of Whirlpool.

**QC. Godrej refrigerator was between**

- A. Allwyn and L.G.      B. L.G and Kelvinator.  
C. Kelvinator and Whirlpool.      D. Whirlpool and BPL.

**QD. Which one of the following groups of refrigerator is to the left of Allwyn refrigerator?**

- A. Godrej, L.G, BPL      B. L.G, Videocon, Kelvinator  
C. Whirlpool, Godrej, BPL      D. Godrej, Videocon, BPL

**Solution:**

**Whirlpool, Godrej, BPL, Allwyn, LG, Videocon, Kelvinator.**

**QLA3.** Each of these questions are based on the information given below:

1. A ,B, C, D and E are five men sitting in a line facing to south - while M, N, O, P and Q are five ladies sitting in a second line parallel to the first line and are facing to North.
2. B who is just next to the left of D, is opposite to Q.
3. C and N are diagonally opposite to each other.
4. E is opposite to O who is just next right of M.
5. P who is just to the left of Q, is opposite to D.
6. M is at one end of the line.

**QA.** Who is sitting third to the right of O?

- A. Q                      B. N                      C. M                      D. Data inadequate

**QB.** If B shifts to the place of E, E shifts to the place of Q, and Q shifts to the place of B, then who will be the second to the left of the person opposite to O?

- A. Q                      B. P                      C. E                      D. D

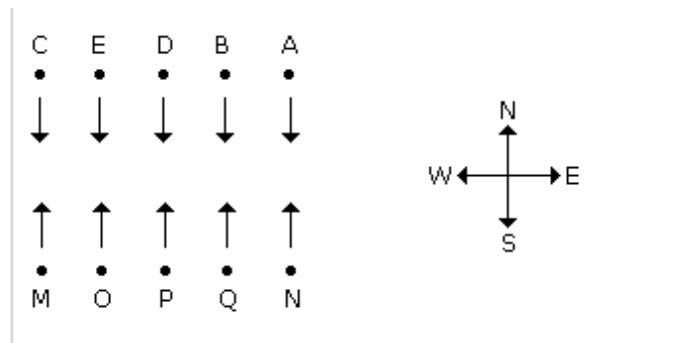
**QC.** Which of the following pair is diagonally opposite to each other?

- A. EQ                      B. BO                      C. AN                      D. AM

**QD.** If O and P, A and E and B and Q interchange their positions, then who will be the second person to the right of the person who is opposite to the person second of the right of P?

- A. D                      B. A                      C. E                      D. O

**Solution:**



- QA. B                      QB. A                      QC. D                      QD. B

## Blood Relations

**QBR1.** A family consists of seven members P, Q, R, S, T, U, V. There are three married couples. Q is an Engineer and father of T. U is grandfather of T and is a contractor. R is daughter-in-law of S who is a nurse by profession. V is T's uncle who is a professor. There is one student, one housewife and one doctor in the family. The student is unmarried and R is sister-in-law of Q.

**QA.** Who is R's husband?

- A. V                      B. Q                      C. T                      D. R

**QB.** Who is T's aunt?

- A. S                      B. P                      C. R                      D. None of these

**QC.** What is profession of P?

- A. Housewife                      B. Nurse                      C. Doctor                      D. a or c

**QD.** Which of the following are married couple?

- A. PV, QR, US                      B. VT, PQ, US                      C. PQ, RV and US                      D. None of these

**QE.** Which of the following is definitely a group of female members?

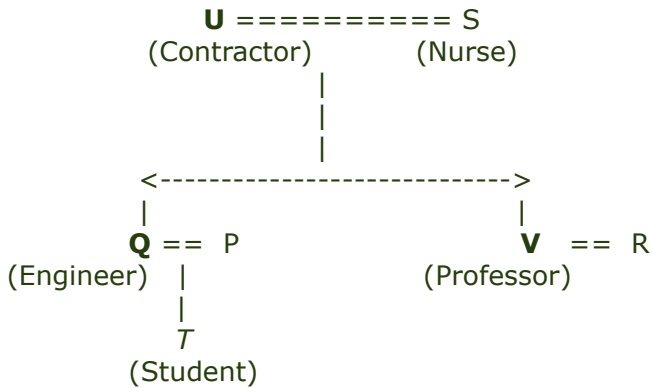
- A. PRST                      B. PRT                      C. PRS                      D. None of these

**Solution:**

Bold:- Men

Not bold:- Women

Italic:- Gender not found out

**QBR2.**

1. **P, Q, R, S, T and U are six members in a family in which there are two married couples.**
2. **T a teacher is married to the Doctor who is mother of R and U.**
3. **Q the lawyer is married to P**
4. **P has one son and grandson.**
5. **Of the two married ladies one is a housewife.**
6. **There is one student and one male engineer in the family.**

**QA. Who among the following is a housewife?**

- A. Q                      B. P                      C. S                      D. T

**QB. Which of the following represents the group of females in the family?**

- A. QTR                      B. PSR                      C. PSU                      D. Data Inadequate

**QC. Which of the following is true about the granddaughter in the family?**

- A. She is a student                      B. She is an Engineer                      C. She is a lawyer  
D. None of these

**QD. How is R related to U?**

- A. Brother                      B. Sister                      C. Brother or sister                      D. None of these

**QE. How is P related to R?**

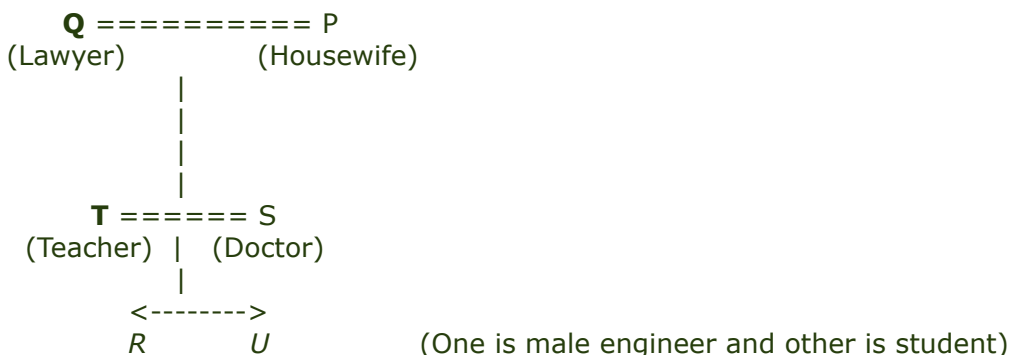
- A. Grandfather                      B. Mother                      C. Sister                      D. Grandmother

**Solution:**

Bold:- Men

Not bold:- Women

Italic:- Gender not found out



**QBR3. Abra is Rambos daughter. Shintu is Rambo's sister. Shintu's daughter is called Cabra and son is called Dabra. Limba is Cabra's maternal Aunt.**

**QA. Abra is Limba's:**

- A. Aunt                      B. Nephew                      C. Uncle                      D. None of these

**QB. Cabra is Rambo's:**

- A. Nephew                      B. Niece                      C. Uncle                      D. Cannot say

**QC. Dabra is Limba's:**

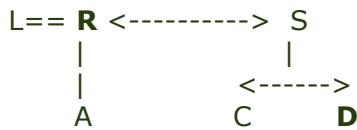
- A. Niece                      B Aunt                      C. Nephew                      D. None of these

**Solution:**

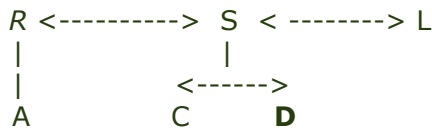
Bold:- Men

Not bold:- Women

Italic:- Gender not found out



**OR**



**Complex Arrangement**

**QCA1. There are 6 male players who play 6 different sports – Cricket, Football, Hockey, Tennis, Badminton, and Athletics. They are married to two Engineers, Doctor, CA, Professor and Housewife in not necessarily the same order. The couples stay in 6 different cities – Ahmedabad, Bangalore, Kolkata, Delhi, Ernakulam and Indore. Following information is given:**

- 1. The football player is married to an Engineer, but does not belong to either Kolkata or Delhi**
- 2. The Doctor and Athlete don't stay in Indore and Ernakulam respectively.**
- 3. The Hockey player is not married to either Doctor or CA, but his wife is not a housewife either.**
- 4. One of the Engineer stays in Delhi.**
- 5. The Hockey player, the Tennis player and Cricketer stay in Kolkata, Indore and Bangalore respectively**
- 6. The lady who stays in Ernakulam is a Housewife**

QA. Who is married to the Hockey player?

QB. In which city does the Doctor stay?

QC. Who is married to the Athlete?

QD. In which city does the Badminton player stay?

**Solution:**

Male	Profession of wife	Cities	
Football	Eng		~Kolkata, ~Delhi
Cricket	Doctor	Bangalore	
Hockey	Professor	Kolkata	~Doc, ~CA, ~HW
Tennis	CA	Indore	~Doc
Badminton	HW	Ernakulam	
Athlete	Eng	Delhi	~Ern

**QCA2.** There are 6 boys Amit, Ananth, Dhruv, Chand, Harsh and Gaurav. They want to go out with 6 girls – Nidhi, Parul, Kruthi, Vidya, Sujata and Radhika, not necessarily in same order. The pairs want to visit movie, beach, park and play; two of them want to go to circus. They like different eatables; pav bhaji, chaat, bhel and pani-puri. Pav-bhaji and chaat are preferred by two pairs. The following information is known.

- Amit and Chand visit circus, but don't like pav-bhaji or pani-puri.
- Gaurav can't go with Sujata and Parul, as both of them don't like chaat
- Vidya and Kruti wants to go to movie and park, respectively.
- Dhruv goes with Radhika to beach, but does not eat chaat or pani-puri.
- Ananth goes to a movie and eats pav-bhaaji.
- Harsh cannot go with Nidhi or Parul and he does not go to a park.

**QA. If Amit goes with Nidhi, bhel is liked by:**

- A. Nidhi                      B. Vidya                      C. Gaurav                      D. Cannot be determined

**QB. Who among the following visits park?**

- A. Harsh                      B. Ananth                      C. Gaurav                      D. Dhruv

**QC. Who must go to a play?**

- A. Nidhi                      B. Sujata                      C. Parul                      D. Kruti

**QD. Dhruv must eat**

- A. Chaat                      B. Pav-bhaji                      C. Pani-Puri                      D. None of these

**QE. Kruti must eat:**

- A. Pani-puri                      B. Chaat                      C. Bhel                      D. Pav-Bhaaji

**Solution:**

Boys	Girls	Place	Eatable	Conditionals not possible
Amit	Parul/Nidhi	Circus	Bhel/Chaat	PB, PP
Chand	Nidhi/Parul	Circus	Chaat/Bhel	PB, PP
Gaurav	Kruti	Park	Chaat	Sujata, Parul
Dhruv	Radhika	Beach	Pav-Bhaji	Chaat, PP
Ananth	Vidya	Movie	Pav-Bhaji	
Harsh	Sujata	Play	Pani-Puri	Nidhi, Parul, Park

## **Circular Arrangement**

**QCR1.** Eight persons – P through W are seated around a circular table. P is opposite U but adjacent to neither R nor W. T is two places away to the left of R. S is adjacent to both P and Q. W is to the right of R.

**QA. Who is opposite W?**

- A. V                      B. Q                      C. T                      D. S                      E. None of these

**QB. Which of the following is true?**

- A. V is adjacent to R.                      B. S is opposite to W                      C. T is opposite to Q  
D. R is opposite to S.                      E. None of these

**QC. Who is to the right of U?**

- A. R                      B. T                      C. Q                      D. W                      E. S

**Solution:**

Clockwise: PVWRUTQS

**QCR2.** Eight boys-A through H are seated around a circular table. A is two places away to the right of B, who is adjacent to C. E is to the left of F. There is only one person between F and H. E is opposite to G.

**QA. Who is opposite to C?**

- A. A                      B. G                      C. D                      D. F                      E. Cannot be determined.

**QB. If B is to the right of G, then who is opposite to H?**

- A. A                      B. F                      C. D                      D. C                      E. G

**QC. If A is to the right of G, then how many boys are seated between A and F?**

- A. 1                      B. 2                      C. 3                      D. 0                      E. Cannot be determined.

**Solution:**

Clockwise: ACBGHDFE or AGBCFEHD

**QCR3: Information:** At a party A, B, C, D and E are sitting in a circle. The group includes a professor, an industrialist and a businessman. The businessman is sitting in between the industrialist and his wife D. A the professor is married to E, who is sister of B. The industrialist is seated to the right of C. Both ladies are unemployed.

**QA. Who among them must be a graduate?**

- A. B                      B. A                      C. C                      D. None of these

**QB. What is A to B?**

- A. Brother                      B. Uncle                      C. Brother-in-law                      D. Son

**QC. Who is the industrialist?**

- A. D                      B. A                      C. B                      D. C

**QD. A is sitting to the right of?**

- A. Industrialist                      B. His wife                      C. D                      D. C

**QE. Who in the group is unmarried?**

- A. Professor                      B. Industrialist                      C. Businessman                      D. Cannot be determined

## Solution:

1.

**A === E**

Professor    A's wife

2. Industrialist's wife is D. (both women are fixed now.) B, E's sibling has to be a man. Industrialist is not C. So industrialist has to be B and Businessman has to be C. B is married to D.

**A === E** < -----> **B ===== D**

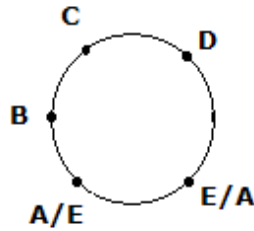
Professor    A's wife

Industrialist

**C**

Businessman

Arrangement:



## Cubes Cutting

**QCC1. The following questions are based on the information given below:**

**All the faces of cubes are painted with red color. The cubes is cut into 64 equal small cubes.**

**QA. How many small cubes have only one face colored?**

A. 4                      B. 8                      C. 16                      D. 24

**QB. How many small cubes have no faces colored?**

A. 24                      B. 8                      C. 16                      D. 0

**QC. How many small cubes are there whose three faces are colored?**

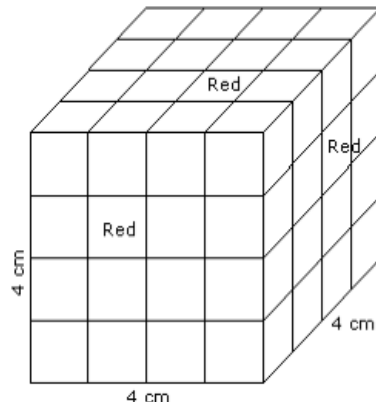
A. 4                      B. 8                      C. 16                      D. 24

**QD. How many small cubes are there whose two adjacent faces are colored red?**

A. 0                      B. 8                      C. 16                      D. 24

There are 64 small cubes.

Hence one side of the big cube =  $\sqrt[3]{64} = 4$  cm.



QA. D  
Number of small cubes having only one face colored =  $(x - 2)^2 \times \text{No. of faces}(6)$

QB. B  
Number of small cubes having no face colored =  $(x - 2)^3$

QC. B  
Number of small cubes having three faces colored = No. of corners = 8

QD. D  
Number of small cubes having two adjacent faces colored red =  $(x - 2) \times \text{No. of edges}(12)$

**QCC2. The following questions are based on the information given below:**  
**A cuboid shaped wooden block has 4 cm length, 3 cm breadth and 5 cm height.**  
**Two sides measuring 5 cm x 4 cm are colored in red.**  
**Two faces measuring 4 cm x 3 cm are colored in blue.**  
**Two faces measuring 5 cm x 3 cm are colored in green.**  
**Now the block is divided into small cubes of side 1 cm each.**

**QA. How many small cubes will have will have three faces colored?**

A. 14                      B. 8                      C. 10                      D. 12

**QB. How many small cubes will have only one face colored?**

A. 12                      B. 28                      C. 22                      D. 16

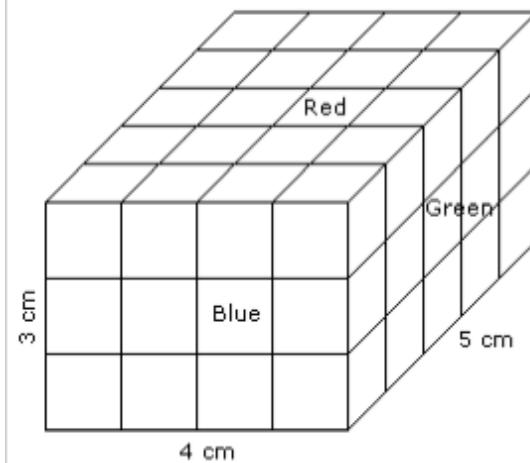
**QC. How many small cubes will have no faces colored?**

A. None                      B. 2                      C. 4                      D. 6

**QD. How many small cubes will have two faces colored with red and green colors?**

A. 12                      B. 8                      C. 16                      D. 20

**Explanation:**



QA. B

QB. C

*2 from the front + 2 from the back + 3 from the left + 3 from the right + 6 from the top + 6 from the bottom = 22*

QC. D

QD. A