

Contents

- Inequality
- Syllogism
- Sitting Arrangement
- Machine Input Output
- Puzzles
- Blood Relation
- Series
- Data sufficiency

Reasoning Inequality Trick - Solve any Question within 10 seconds

Today I am going to share King Soldiers and Public technique to solve Inequalities. By using this technique, you can solve any question from Inequalities within 10 seconds. In every exam, at least 5 questions are asked from this topic.



Points to remember

- King is more powerful than Soldiers
- Soldiers are more powerful than Public
- Whenever there is a conflict between two Kings, then there will be no conclusion
- When there is a conflict between two soldiers, then there will be no conclusion

Let King means < or >



Soldier means < or >



Public means =



Case 1. 'King vs King'



Suppose there is a war going on between two kings. Whenever the two kings face each other means war. In other words conclusion will be wrong.

Note: Two signs opposite to each other will make the conclusion wrong But again if the signs are in same manner that will not make it wrong.

like this

If $A > B < C > D$ then $A < C = \text{False}$, $C > A = \text{False}$.

But

If $E > F > G > H$ then $E > G = \text{True}$, $F > H = \text{True}$, $E > H = \text{True}$.

Statement: $A < D > C < E > B$

Conclusions:

- $C > B$ False
- $A < E$ False
- $D > B$ False

In simple way, Whenever these two sign comes in opposite direction the answer will be false.

Case 2. 'Soldier vs Soldier'



Whenever the soldiers face each other means again war (same apply here). In other words conclusion will be wrong.

Note: Two signs opposite to each other will make the conclusion wrong But again if the signs are same then it will be true.

like this

Reasoning Shortcut Tricks

If A B C then A C = False , C A = False.

But

If A B C then A C = True , C A = True.

Example

Statement: B D A F C

Conclusions :

- I. A C False
- II. B F False
- III. D C False

Case 3. Sets Priority:

If they all are comes in order then kings' priority will be first ,soldier's second and public at last.



Statement: P R > Q = T S

Conclusions :

- I. P Q False
- II. P > Q True
- III. Q S True

Case 4.

When it occurs to you that the statement of order is opposite just change the sign into similar opposite direction

Change the sign into similar opposite /corresponding / alternative direction.

If $A > B > F > C < D < E$

than $F < A$ True [$A > B > F = F < B < A$]

Example:

Statements : $A > B > F > C$; $D > E > C$

Conclusions:

I. $C < A$ True

II. $C > A$ False

Statements : $R < S$; $T > U > X$; $T < V < W$

Conclusions:

I. $R > X$ True [Note: Apply Case 3 here]

II. $X < R$ True [Note: Apply Case 3 & 4 here]

Statements : $K < L$; $M = N$; $P < O$; $N < P$

Conclusions:

I. $K < O$ → False

II. $K = N$ → False

Neither Nor

III. $K < M$ True

IV. $K < P$ False

V. $K = P$ False

Statement IV & V Apply Either Or

Case 5. Protocols



Reasoning Shortcut Tricks

There are some rules in battle field which is that king only fights with king and soldier only fights with soldier.

So Whenever you find two conclusions which are false Just check for these two symbols. In Most of case where two conclusions are false and these two similar signs are not there respectively then that statement you can call it as Either Or but should check there variable it should same.

#Case Either Or :

Note : First thing you need to check whether in your conclusion any 2 or more conclusions are wrong

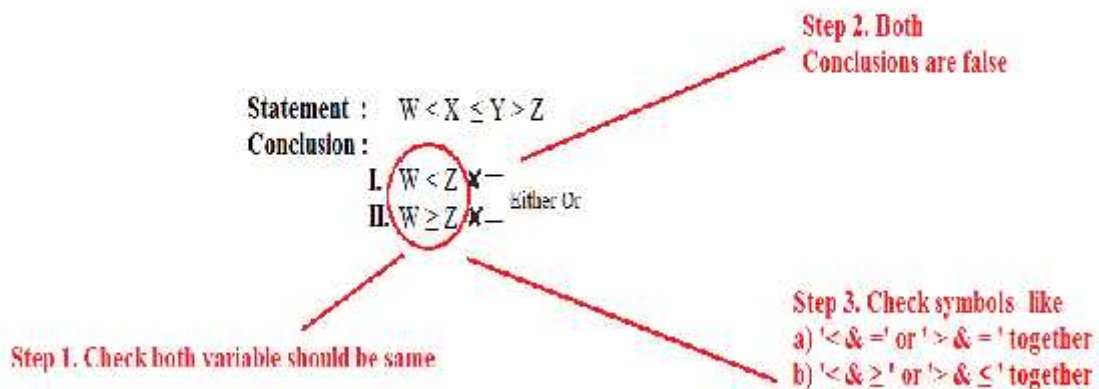
then if it is there then check whether the two variables are same If It happens then write it as 'Either or' but after checking their symbols.

Rules:

1. Both conclusion should False
2. Should have Same Predicate or Variable
3. Check the symbols

If 3 Condition is satisfied then write it as " Either Or' Other wise leave it.

Note : If 3 condition is satisfied than the conclusions are called Either Or



Solved Questions :

Statement : $H = W \leq R > F$

Conclusion :

- I. $R = H$ ✗
- II. $R > H$ ✗
- Either Or

Statement : $H > L = E < T$
 Conclusion :

I. $H \leq T$ ✗
 II. $H > T$ ✗

Either Or

Statement : $S < T \geq R \geq M$

Conclusion :

I. $M < T$ ✗
 II. $M = T$ ✗

Either Or

Statement : $I \geq H = T > S \leq R$

Conclusion :

I. $I > T$ ✗
 II. $I = T$ ✗

Either Or

#Case Neither Nor :



Reasoning Shortcut Tricks

There are some rules in battle field which is that king only fights with king and soldier only fights with soldier.

So Whenever you find two conclusions which are false Just check for these two symbols. In Most of case where two conclusions are false and these two signs are not there respectively then that statement you can call it as Neither Nor.

Note : First thing you need to check whether in your conclusion any 2 or more conclusions are wrong then write it as 'Neither Nor' but before checking their symbols.

Rules:

1. Both conclusion should False
2. Check the symbols

If Both Conditions are satisfied then write it as " Neither Nor' Other wise leave it.

Statement : $P > Q \geq S = R$

Conclusion :

I. $P \geq R$ ✗
II. $R > Q$ ✗

} Neither nor

Statement : $L = T \leq J \geq K$

Conclusion :

I. $L > K$
II. $T \leq K$

} Neither Nor

Statement : $V < L \geq J \leq T$

Conclusion :

- I. $V < J$ ☐ Neither Nor
 II. $L = T$ ☐ Neither Nor

Statement : $G \leq K \leq F < M$

Conclusion :

- I. $G > F$ ☐ Neither Nor
 II. $K \leq M$ ☐ Neither Nor

How to solve 'Either Or' & 'Neither Nor' Question

Let
 statement $R < Q > P \leq V \geq M$

Conclusion :

- a) $R < P$
 b) $R \geq P$

Term Used:

st. = statement

a) = conclusion a

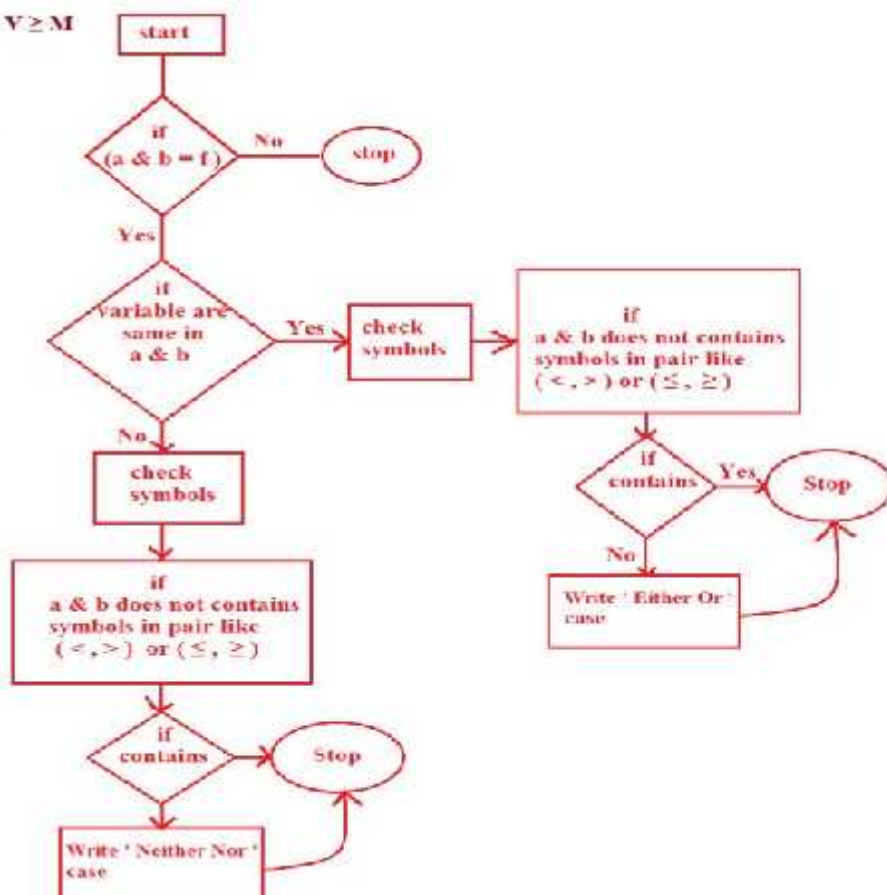
b) = conclusion b

f = false

R = variable

P = variable

pair



Reasoning Shortcut Tricks

Inequality shortcut technique

Directions (Q. 1-5)

In the following questions, the symbol $\$, \star, @, \#$ and $\$$ are used with the following meaning as illustrated below.

'P \star Q' means 'P is not greater than Q'.

'P $\$$ Q' means 'P is not smaller than Q'.

'P $\$$ Q' means 'P is neither smaller than nor greater than Q'.

'P @ Q' means 'P is neither smaller than nor equals to Q'.

'P # Q' means 'P is neither equal to nor greater than Q'.

Now in each of the following questions assuming the given statements to be true, find which of the three conclusions, 1,2,3 given below them is/are definitely true and give your answer accordingly.

#1

Statements N $\$$ B, B $\$$ W, W # H, H \star M

Conclusions:

I. M @ W

II. H @ N

III. W $\$$ N

IV. W # N

- 1) Only I is true
- 2) Only III is true
- 3) Only IV is true
- 4) Only either III or IV is true
- 5) Only either III or IV and I is true

#2

Statements R \star D, D $\$$ J, J # M, M @ K

Conclusions:

I. K # J

II. D @ M

III. R # M

IV. D @ K

- 1) None is true
- 2) Only I is true
- 3) Only II is true
- 4) Only III is true
- 5) Only IV is true

#3

Statements H @ T, T # F, F § E, E ☆ V**Conclusions:**

- I. V \$ F
 II. E @ T
 III. H @ V
 IV. T # V

- 1) Only I, II and III are true
- 2) Only I, II and IV are true
- 3) Only II, III and IV are true
- 4) Only I, III and IV are true
- 5) All I, II, III and IV are true

#4

Statements D @ R, R ☆ K, K @ F, F \$ J**Conclusions:**

- I. J # R
 II. J # K
 III. R # F
 IV. K @ D

- 1) Only I, II and III are true
- 2) Only II, III and IV are true
- 3) Only I, III and IV are true
- 4) All I, II, III and IV are true
- 5) None of the above

#5

Statements M \$ K, K @ N, N ☆ R, R # W**Conclusions:**

- I. W @ K
 II. M \$ R
 III. K @ W
 IV. M @ N

- 1) Only I and II are true
- 2) Only I, II and III are true
- 3) Only III and IV are true
- 4) Only II, III and IV are true
- 5) None of the above

Reasoning Shortcut Tricks

Directions (Q. 6-11)

In the following questions, the symbol @, ©, %, ☆ and \$ are used with the following meaning as illustrated below.

'P © Q' means 'P is not greater than Q'.

'P \$ Q' means 'P is not smaller than Q'.

'P @ Q' means 'P is neither smaller than nor greater than Q'.

'P ☆ Q' means 'P is neither greater than nor equals to Q'.

'P % Q' means 'P is neither equal to nor smaller than Q'.

Now in each of the following questions assuming the given statements to be true, find which of the three conclusions, 1,2,3 given below them is/are definitely true and give your answer accordingly.

#6

Statement : D @ M, M \$ B, B ☆ R, R % T

Conclusion:

I. B ☆ D

II. B @ D

III. T ☆ M

- 1) None is true
- 2) Only I is true
- 3) Only II is true
- 4) Only III is true
- 5) Only either I or II is true

#7

Statement : W © F, F @ D, D ☆ K, K \$ J

Conclusions: I. K % W

II. D \$ W

III. F ☆ K

- 1) Only I and II are true
- 2) Only I and III are true
- 3) Only II and III are true
- 4) All I, II and III are true
- 5) None of the above

#8

Statements R * K, K © M, M % T, T \$ J

Conclusions : I. J * M

II. R * M

III. $K \odot J$

- 1) Only I is true
- 2) Only II is true
- 3) Only I and II are true
- 4) All I, II and III are true
- 5) None of the above

#9

Statements $R @ K, T \odot K, T \$ M, M * W$

Conclusions: I. $W \% K$

II. $M \odot R$

III. $T \odot R$

- 1) Only I is true
- 2) Only II is true
- 3) Only III is true
- 4) All I, II and III are true
- 5) None of the above

#10

Statements $T \$ N, N \% B, B @ W, K \odot W$

Conclusions: I. $K \$ B$

II. $K \$ T$

III. $T \% B$

- 1) Only I and II are true
- 2) Only I and III are true
- 3) Only III is true
- 4) All I, II and III are true
- 5) None of the above

#11

Statements $Z \% V, V * J, J \odot M, M @ R$

Conclusions: I. $R \% V$

II. $M \% V$

III. $Z \% M$

- 1) Only I and II are true
- 2) Only I and III are true
- 3) Only II and III are true
- 4) All I, II and III are true
- 5) None of the above

Reasoning Shortcut Tricks

Direction Q (12-16) In these questions relationships between different elements is shown in the statements. These statements are followed by two conclusions.

Give Answer

- 1) If only conclusion I follows
- 2) If only conclusion II follows
- 3) If either conclusion I or conclusion II follows
- 4) If neither conclusion I or conclusion II follows
- 5) If both conclusion I and II follow

#12

Statements $N > O$ $P = Q > R$

Conclusions

- I. $N > R$
- II. $R = N$

#13

Statements $W < X < Y = Z > A$; $W < B$

Conclusion

- I. $B > Z$
- II. $W < A$

#14

Statements : $H > I > J > K$; $L > M < K$

Conclusions

- I. $I > M$
- II. $L < H$

#15

Statements : $C < D < E$; $D > F > G$

Conclusions

- I. $C > G$
- II. $F > E$

#16

Statements : $R > S > T > U$; $V < T$

Conclusions:

- I. $V > U$
- II. $V < R$

Syllogism Shortcuts - Systematic Method to Solve Questions

All

1) All A is B



(1)

2) All B is A



(2)

Some

1) Some A is B



(1)

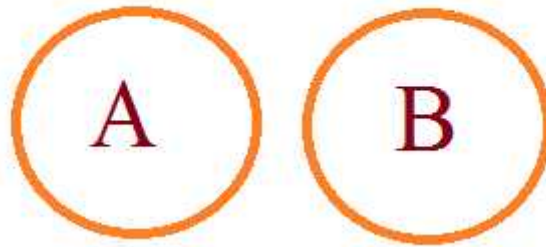
2) Some B is A



(2)

NO

No A is B

**Case # All - Some**

Let!

You have 1000 \$ in your pocket. One of your friend needs 600 \$ to pay his Bill. He wants to borrow money from you. He comes to you and says, "Do you have 600 \$? What would you say," Of course Yes!". Even if He ask for 1 \$, or 999 \$. Your answer will always "Yes!".

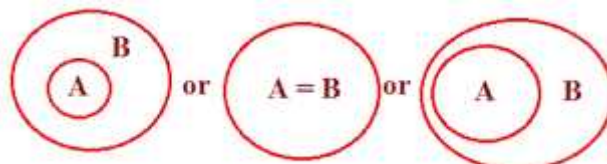
So Overall you had 1000 \$ which is called "All " or All of the money you had & What is your friend want some of the money like here 600 or it could be 1\$ or 999 \$ and what we call that some portion of money out of it. or " Some".

That's why In " All " Case, "Some" is always true.

Example:

Statement : All A are B.

Possible Diagram



Conclusion

- All A are B ✓
- Some A are B ✓
- Some B are A ✓
- Some A are not B ✗

Reasoning Shortcut Tricks

Some B are not A ✗

Statement : All A is B.**Conclusion**

Some A is B	✓
Some B is A.	✓
All B is A	✗



Let

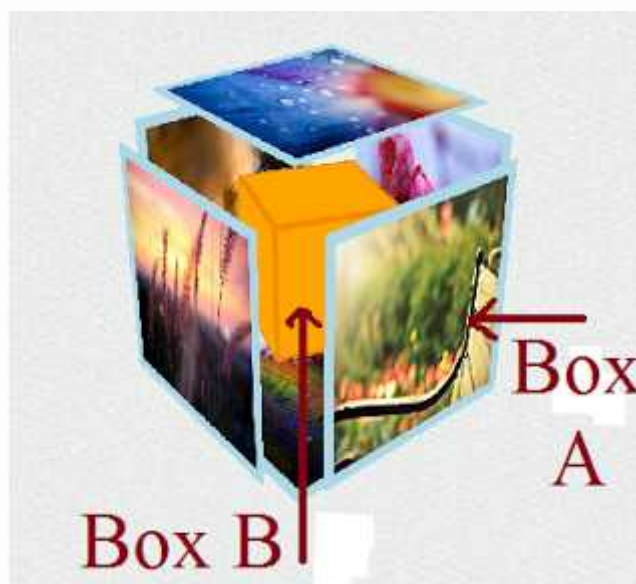
$$B = \{ 1, 2, 3, 4, 5, 6, 7, 8 \}$$

$$A = \{ 4, 5, 6, 7 \}$$

Now Here we can see that A contains set of numbers. So we call it is as Set A and Same for B 'Set B'. All the numbers in A is contains by B hence All A is B true But All the numbers in B is not in A or not contain by A so All B is A False.

Now Let understand How All A is B True But All B is A False

Let Box A & Box B . Here We can see that Box B is inside the Box A Hence Box B can fit into Box A but Box A cannot fit into Box B.



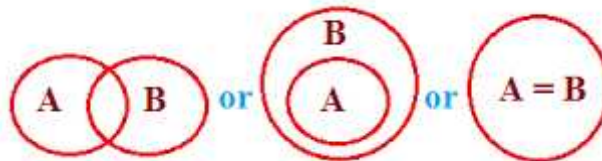
Case # Some - Some Not



Assume you have given the exam & you passed with some marks that means you got some marks and some or not. even if you passed the exam with 99% marks still you missed the 1%. So Even 99% is count under the some case. and 1% is also count under some case. hence In 'Some' case 'Some Not' is true.

Statement : Some A are B

Possible Diagram



Conclusion

All B are A ✗

Some B are A ✓

No A is B ✗

Statement : Some A are not B

Possible Diagram



Statement : Some A is B

Conclusion

Some A is not B ✓

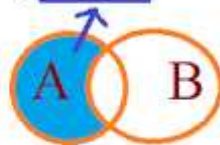
Some B is A ✓

Some B is not A ✓



Explanation

1) Some A is not B



2) Some B is A



3) Some B is not A



Let

$$B = \{ 1, 2, 3, 4, 5, 6, 7, 8 \}$$

$$A = \{ 4, 5, 6, 7, 8, 9, 10, 11 \}$$

Here we see that Set A & Set B has some common values hence we can say that Some A is B & Some B is A But there also some values which are not common in both A & B. So We can also say that Some A are not B & Some B are not A.

Case # No- Some Not



"I'm sorry, son, but I'm not in the bad debt business anymore."

Assume You have no money in your pocket. So if you got no money. It means also that some money is not in your pocket. Having No means also some not.

	Identifier	Subject	Predicate	Statement	Conversion	Accurate	Possible
Universal Statement	All	A	are B	All A are B	Some		
				Some A are B	Some		
Particular Statement	No	A	is B	No A is B	No, Some not		
				Some A are not B	No conversion		

Point to Remember while Solving Syllogism

- Anything is possible in a statement. like Some pens are fans. No fan is heater
- Negative Answer will never be there.

Simple Case

Statement	Conclusion
Some	All , No , [False] Some, Some Not [True]
All	No , Some Not [False] Some , All [True]
Some Not	Only Statement [True]
No	Some , All [False]

Reasoning Shortcut Tricks

	No , Some Not [True]
--	------------------------

Possibility

Statement	Conclusion
Some	No , Some [False] All , Some Not [True]
All	✗
No	✗
Some Not	Some Not , All [False] Some , No [True]

Some Examples

Statement : Some A are B, Some B are C , All C are D



Conclusion

Some A are not D ✗

Some B are D ✓

Some A are C ✗

Statement Some A are B, Some B are C, No C is D



Conclusion

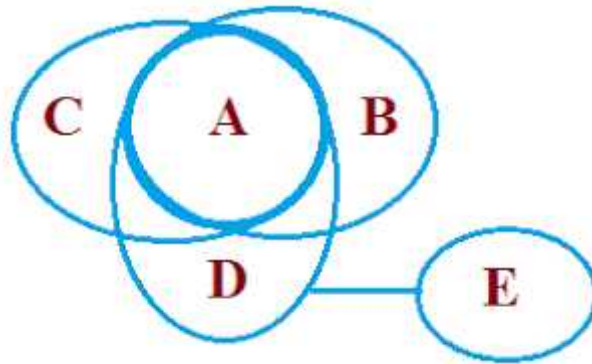
Some B are not D ✗

Some D are not B ✗

Some A are C ✗

Statement All A are B , All A are C , All A are D , No D is E

Reasoning Shortcut Tricks



Conclusion

- Some B are not E ✓
- Some A are not E ✓
- No C is E ✓
- No A is E ✓
- No E is A ✓

Statement : Some A are B, Some B are C, Some C are D, Some D are E



Conclusion

- Some C are not A ✗
- Some B are not D ✗
- Some A are E ✗
- All B are D ✗
- No A is E ✗
- Some C are A ✗
- All B are E ✗
- No B is E ✗

' Either Or ' & ' Neither Nor '

Complementary Pair

1. If One Conclusion is positive & One is Negative

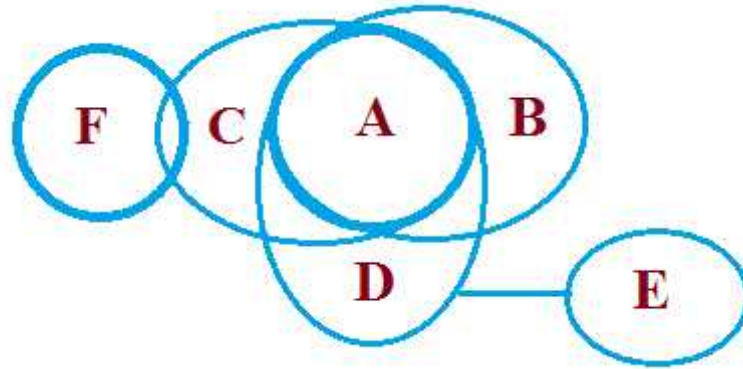
- No - Some
- Some - Some Not
- All - Some Not

2. Same Subject & Same Predicate are there

3. & not able to draw both the conclusion then answer will be Either Or

Example

Statement All A are B , All A are C , All A are D , No D is E, Some F is C



Conclusion


Some D are not E ✓
Some A are not E ✓
No C is E ✓
No A is E ✓
No E is A ✓
No E is C ✓
Some F is not E ✓
No E is F ✗
All F being C
is a possibility ✗

Statement : Some A are B, Some B are C, Some C are D, Some D are E



Conclusion

Some B are not D ✗
Some C are A ✗
Some A are not E ✗
All A are E ✗
Some B is D ✗
No C is A ✗
All A are D ✗
No A is D ✗

Note: 
Either
Or

Exception

1. In case of Universal (like 'All & No') Conclusion Complementary pair does not work
2. In this type of Question " Neither Nor "

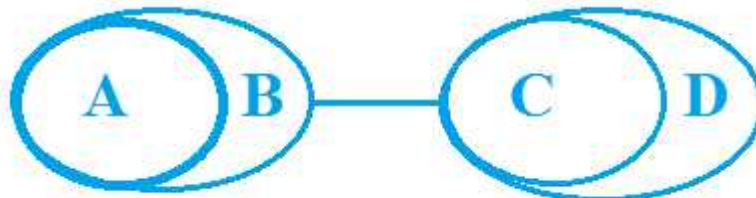
Statement Some A are B, All B are C, No C is D



Conclusion

Some A are not D ✗
 No B is D ✗
 Some A are C ✗
 Some D are B ✗

Statement All A are B, No B is C, All C are D

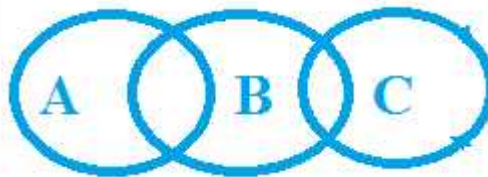


Conclusion

Some A are not D ✗
 No D is B ✗
 No A is C ✓
 No A is D ✓
 No D is A ✗

Possibility

Statement Some A are B, Some B are C



Conclusion

- | | |
|--|---|
| a) Some A are B | ✓ |
| b) Some B are A | ✓ |
| c) Some A are not C | ✗ |
| d) Some A are B is being a possibility | ✗ |
| e) Some B are A is a possibility | ✗ |
| f) Some A are not C is a possibility | ✓ |

Explanation (Simple case A,B& C) :

Let A, B & C are three person. A & B knows each other. B & C knows each other But B knows both. Now Will A talk about C ? Answer is 'Not!, Neither Positive Nor Negative' because he doesn't know him. So conclusion C is False.

Possibility Case (Conclusion : D,E & F) :

Now Lets take a look at conclusion E. Now Suppose there is raining outside your home and someone comes to you and say there is a possibility to rain today. What would you say to him, 'Mad!' Same scenario is here By looking at diagram it clearly says that Some B are A then how could he say it is 'possible' which is actual there. Hence Possibility make it wrong or false the conclusion. So Conclusion E is wrong.

Reasoning Shortcut Tricks

Now talk about conclusion F which says Some A are not c which we don't know but it says let it is a 'possibility' so anything could be possible which doesn't make our statement wrong or contradict with statement.If we make it like this below:



We talk here about possibility which could be anything which especially not contradict with our statement. So F which was False in Simple Case but When we talk about possibility is became true.

Let another example for this. Now Let There is a cloudy sky outside your home. Someone comes to you and say , " There is a possibility that there might be rain today", Now you have no idea whether it rain today or not. So you might be say , " Bro! It is possible". Now here you cannot talk about negative because in Syllogism Negative Answer will never be there.



In a statement word like these called possibility

- Can be
- Possible
- May be / might be
- Chances
- Occurs
- is being possibility
- is a possible

In a statement word like these called surety

- Can Never be
- Can

Reasoning Shortcut Tricks

Reasoning Seating Arrangement Shortcut Trick

Today I am going to share technique to share seating arrangement (sitting arrangement) question sets.

Cases of Seating Arrangement

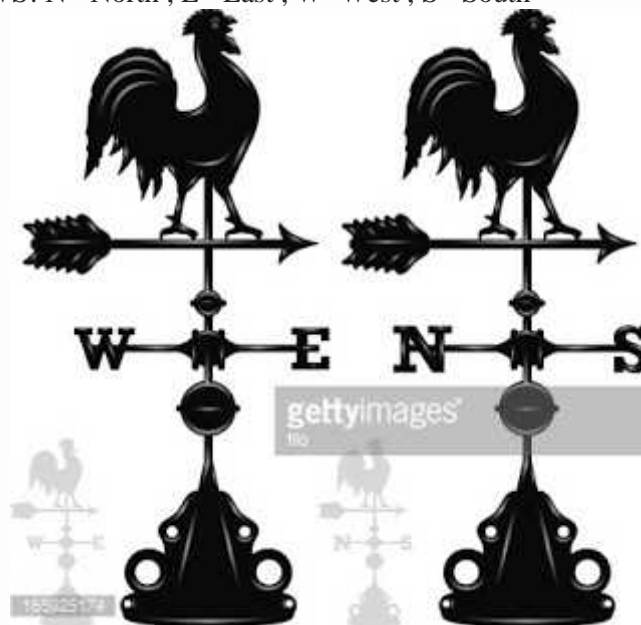
1. Circle
2. Square
3. Rectangle
4. Lines

Solving Seating Arrangement

Circle is the most important case from the exam point of view. Most of the times Circle kind of statements are there in exams.

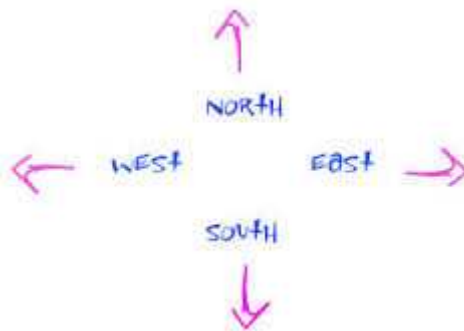
From the exam point of view ,In most cases they give 8 person sitting in the circle.
But Before Solving the important thing is their ' Sitting position '.

Step 1 . Knowing NEWS! N= North , E= East , W=West , S= South



To remember this just remember combination ' North - South ' & ' West - East ' which comes together to each other respectively.

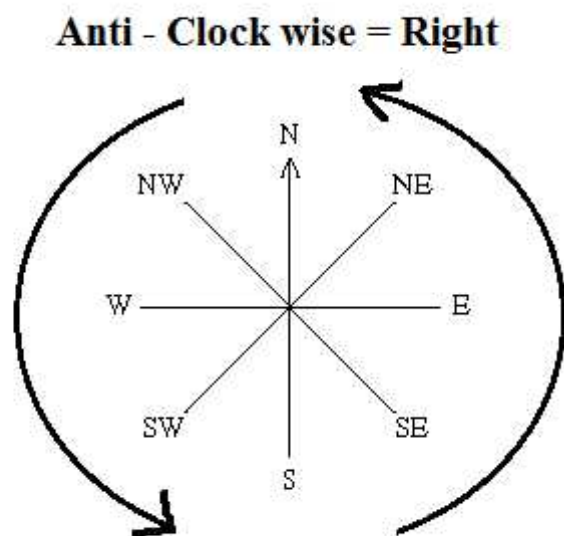
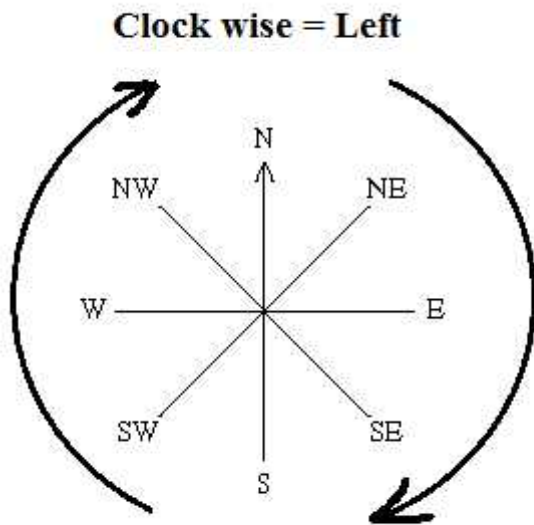
So remember " WE are Not Smokers" for combination
Now just place like this on paper



Step 2 : Picking Left & Right .

Reasoning Shortcut Tricks

- Facing Center



- Facing Outside

If It is mention in the statement that all is facing outside then just do opposite of above like this:
Clock wise = Right & Anti- clock wise = Left

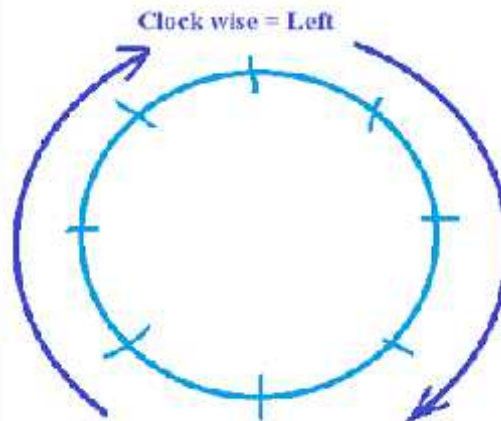
Step 3: Solving Step Wise the statement or Following the statement

Example :

Eight people E, F, G, H, J, K, L and M are sitting around a circular table facing the center. Each of them is of a different profession Chartered Accountant, Columnist, Doctor, Engineer, Financial Analyst, Lawyer, Professor and Scientist but not necessarily in the same order. F is sitting second to the left of K. The Scientist is an immediate neighbor of K. There are only three people between the Scientist and E. Only one person sits between the Engineer and E. The Columnist is to the immediate right of the Engineer. M is second to the right of K. H is the Scientist, G and J are immediate neighbor of each other. Neither G nor J is an Engineer. The Financial Analyst is to the immediate left of F. The lawyer is second to the right of the Columnist. The Professor is an immediate neighbor of the Engineer. G is second to the right of Chartered Accountant.

Before solving remember

1. No of Persons = 8 , No of Profession = 8
2. Facing Center
3. 8 persons 8 profession



Reasoning Shortcut Tricks

Persons	Professions
E	
F	
G	
H	
J	
K	
L	
M	

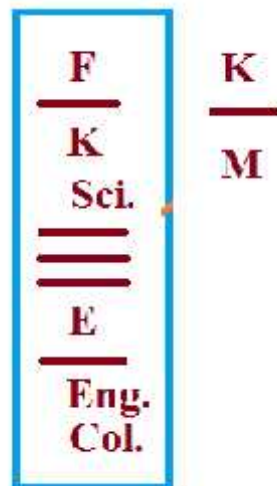
Step 4 : Break statement into Shortcuts

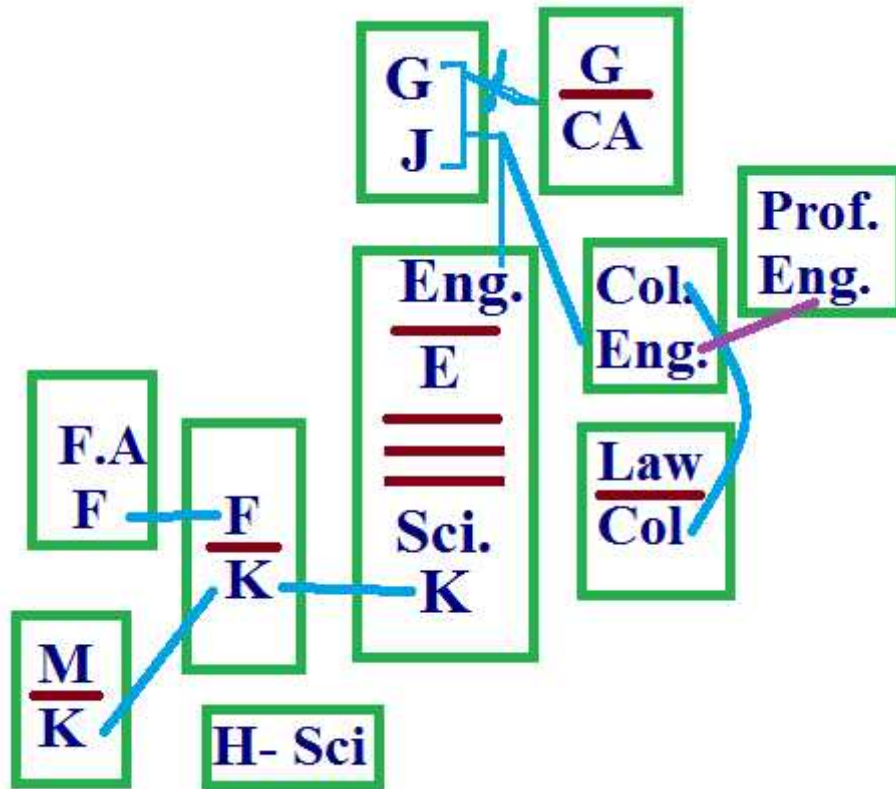
Statement: F is sitting second to the left of K.

We can write it as:



[Note : The Above diagram shows that there is one place vacant between F & K]
Will get like this:





Step 5. Applying these Shortcuts into Circle Diagram

Be careful while positioning or placing Scientist and Engineer. There you need to make two diagram for each.

Step a) Pick any place and place it there the one person whom you want to be placed.
(Be careful while choosing that particular person or element like here E, F, G, H, J, K, L, M, N)

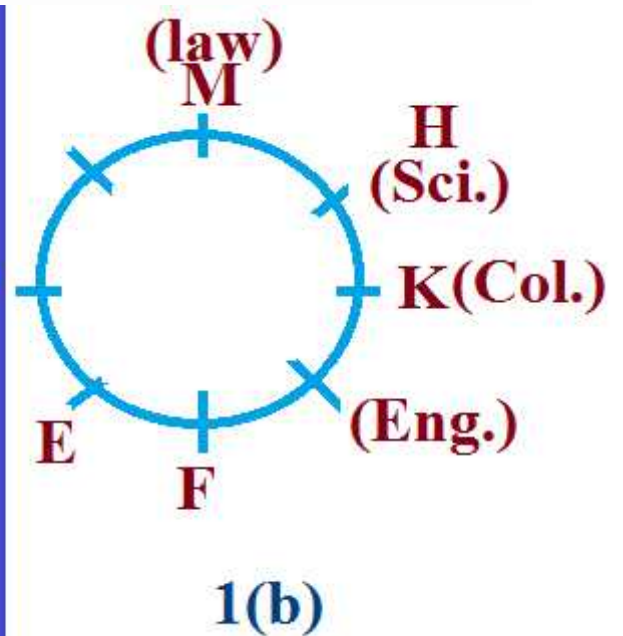
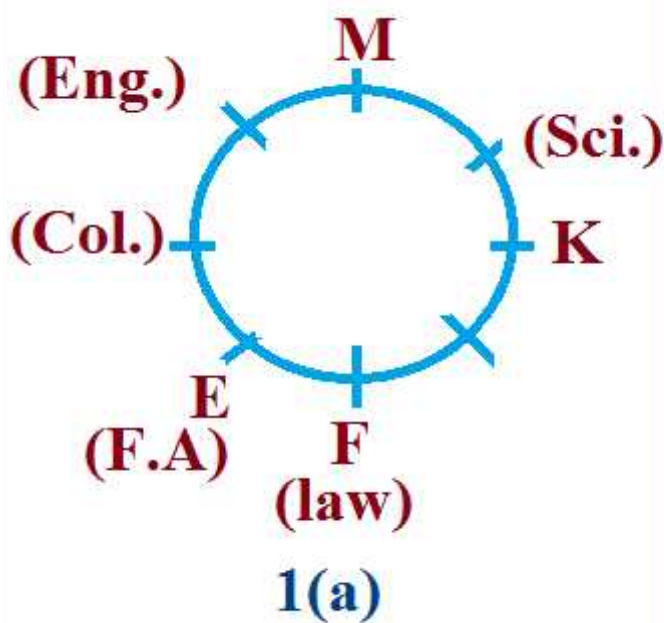
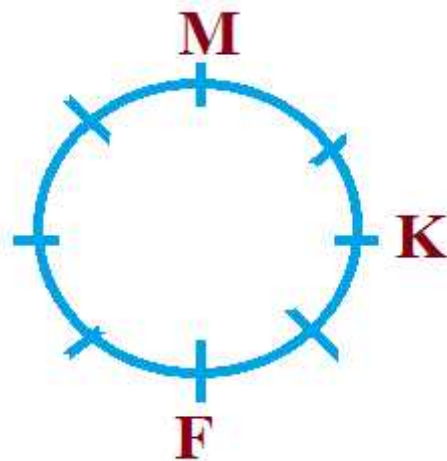
The one person or element you choose, should be relate with at least 2 element of the statement because it will make the other step easy for you. Try to choose the co-relating element which help you to fill the maximum space or seats or corners or places and Always choose the one in which you know the exact location (Left or Right).

Now here i choose F. F relates with K and M

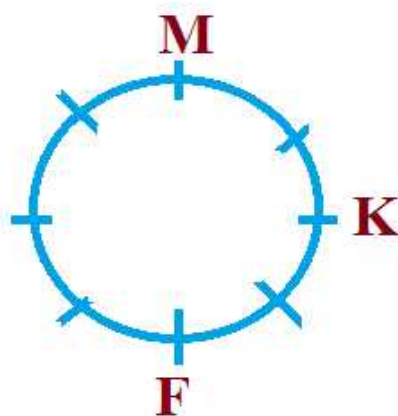
[Note: Don't go again & again for reading whole statement, just use the shortcuts that you have made]

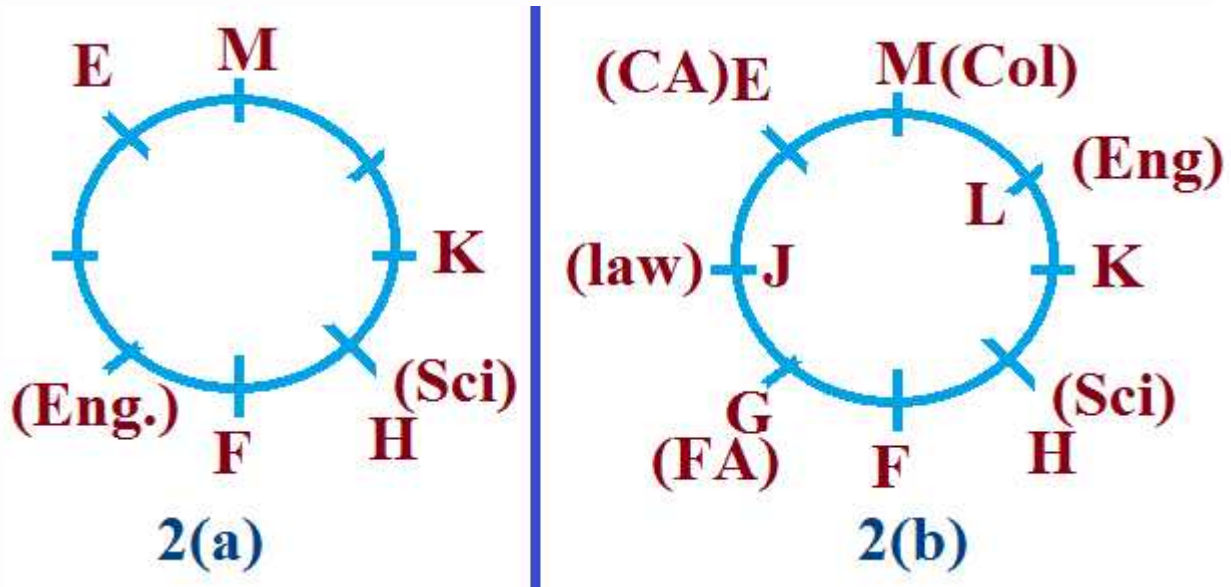
Step b) Now check whether the already placed element co-relate with any other elements. like here The Scientist is an immediate neighbor of K. So here is the relation between K & Scientist. Now here we don't know the exact position of Scientist. So Most of cases you will find this kind of problem. When there is a two possibility then it is Called 'T' point.

Step c) Find whether there is any T point in a statement. Solve it by making two different diagram. Like here 1(a) & 2(a) which will further be checked whether these diagram satisfied the other problems or condition or statement given in the question. If it is not then make other two diagram. Like Here (1b & 2b). At the end , you will get the answer.

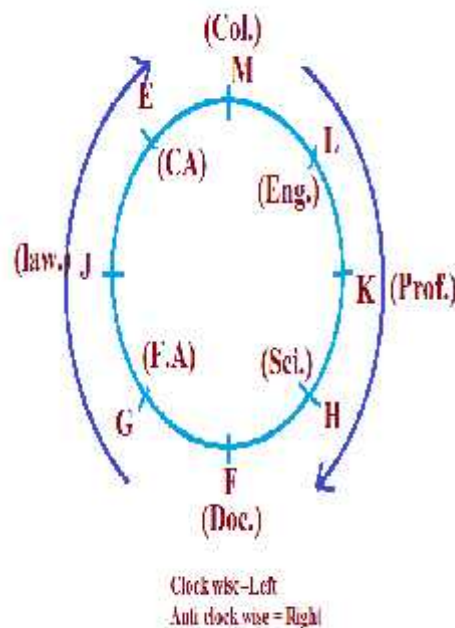


In 1(a) & 1(b) We are unable to position the person G & J. So 1(a) & 1(b) diagram is not possible. Now Move to 2(a).





In 2(a) Engineer cannot be placed next to F. So 2(a) diagram is not possible.



Machine Input Output Shortcut Trick

Patterns

1. Pattern Based On Shifting
2. Pattern Based On Arrangement
3. Pattern Based On Mathematical Operation
4. Miscellaneous Approach Or Other Patterns

1. Based On Shifting

In this pattern, you will find the elements are shifting from one place to other.

Reasoning Shortcut Tricks

Important Note:

- In shifting problems, the previous step of any step can possibly be determined, so we can move in backward or reverse order which is not possible in some of the other type of problems.

How to solve Problems Based on Shifting

Lets take an Example

Input: Boy Crazy Guy Other Help Charm

Step 1. Boy Other Guy Crazy help Charm

Step 2. Boy Other Help Crazy Guy Charm

Step 3. Charm Other Help Crazy Guy Boy

Step 4. Charm Crazy Help Other Guy Boy

Step 5. Charm Crazy Guy Other Help Boy

Step 6. Boy Crazy Guy Other Help Charm

Shifting of element can easily be understood by marking them equivalent to number like

Boy = 1, Crazy = 2, Guy = 3, Other = 4, Help = 4, Charm = 5.

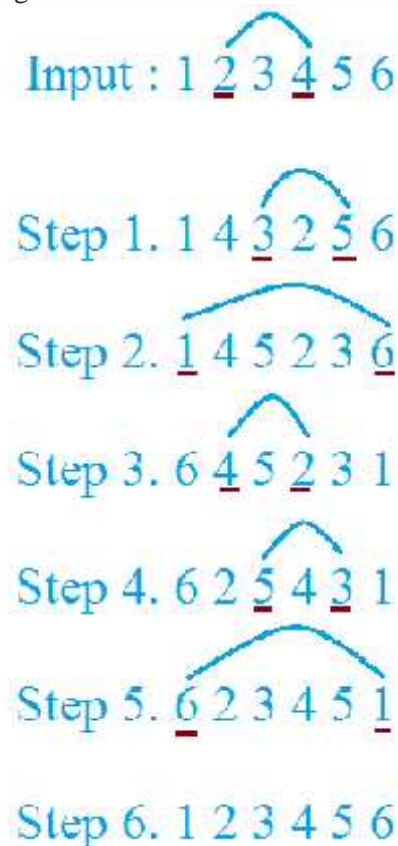
Input can be written as 1 2 3 4 5 6

Step 1, 2 and 4 interchanged

Step 2. 3 & 5 interchanged

Step 3. 1 & 6 interchanged

Step 4. Step 1, 2 & 3 are repeated again.



2. Based on Arrangement

Rules :

1. Previous Step can never be determined. Let we have given Step VI & then ask to find Step V or IV or III, so this is clear gives you the answer 'Cannot be determined'
2. Let Total No. Of element or words or numbers in input is 8. So take $n = 8$ then Maximum step can be made through this input is $(n - 1)$. It will only happen in the case of Arrangement.
3. To find particular step (Let x) for any input, logically pick 1st x alphabetical word or numbers in increasing order and just place them before the remaining word or numbers. This is the case Apply when given Input is an 'Increasing Order' & For Decreasing Order last x word or numbers should be picked. We will do this through example later in this article.

Different types of Arrangements:

1. From Left
2. From Right
3. Left-Right Alternate Arrangement
4. Increasing/Decreasing Arrangement of Numbers
5. Left-Right Alternate Arrangement of Numbers
6. Arrangement of word & Number simultaneously

1. From Left

Input : time drive lift ever when
Step I. drive time lift ever when
Step II. drive ever time lift when
Step III. drive ever lift time when

2. From Right

Input: fame tame line screw abstract
Step I. fame line screw abstract tame
Step II. fame line abstract screw tame
Step III. fame abstract line screw tame
Step IV. abstract fame line screw tame

3. Left- Right Alternate Arrangement

Input : Ravi got the first position
 Step I. first Ravi got the position
 Step II. first Ravi got position the
 Step III. first got Ravi position the
 Step IV. first got position Ravi the

4. Increasing/Decreasing Arrangement

Input 82 49 53 79 13
 Step I. 13 82 49 53 79
 Step II. 13 49 82 53 79
 Step III. 13 49 53 82 79
 Step IV. 13 49 53 79 82

Increasing

Input 37 19 82 49 61 52
 Step I. 37 19 49 61 52 82
 Step II. 37 19 49 52 61 82
 Step III. 19 37 49 52 61 82

Decreasing

5. Left-Right Alternate Arrangement of Numbers

Input : 71 28 93 49 67 18
 Step I. 18 71 28 93 49 67
 Step II. 18 71 28 49 67 93
 Step III. 18 28 71 49 67 93
 Step IV. 18 28 49 67 71 93

6. Arrangement of Word & Numbers Simultaneously

Case 1.

Input : 74 draw bring 52 tall line 98 32 hit

Step I. 32 74 draw bring 52 tall line 98 hit
 Step II. 32 bring 74 draw 52 tall line 98 hit
 Step III. 32 bring 52 74 draw tall line 98 hit
 Step IV. 32 bring 52 draw 74 tall line 98 hit
 Step V. 32 bring 52 draw 74 hit tall line 98
 Step VI. 32 bring 52 draw 74 hit 98 tall line
 Step VI. 32 bring 52 draw 74 hit 98 line tall

Reasoning Shortcut Tricks

Case 2.

Input : 84 jar pickle 15 journey long 46 sweet 23 94

Step I. jar 84 pickle 15 journey long 46 sweet 23 94

Step II. ar 15 84 pickle journey long 46 sweet 23 94

Step III. jar 15 journey 84 pickle long 46 sweet 23 94

Step IV. jar 15 journey 23 84 pickle long 46 sweet 94

Step V. jar 15 journey 23 long 84 pickle 46 sweet 94

Step VI. jar 15 journey 23 long 46 84 pickle sweet 94

Step VII. jar 15 journey 23 long 46 pickle 84 sweet 94

Case 3.

Input : she 91 hit 72 slow 12

Step I. 91 she hit 72 slow 12

Step II. 91 slow she hit 72 12

Step III. 91 slow 72 she hit 12

Step IV. 91 slow 72 she 12 hit

Case 4.

Input : mark 21 school 89 ahead 65

Step I. school mark 21 89 ahead 65

Step II. school 89 mark 21 ahead 65

Step III. school 89 mark 65 21 ahead 65

Step IV. school 89 mark 65 ahead 21

Example:

Input vain istanbul tomorrow mind blowing gesture of the elbow

Step 1. blowing vain istanbul the mind gesture of elbow

Step 2. blowing elbow vain istanbul the mind gesture of

Step 3. blowing elbow gesture vain istanbul the mind of

Step 4. blowing elbow gesture istanbul vain the mind of

Step 5. blowing elbow gesture istanbul mind vain the of

Step 6. blowing elbow gesture istanbul mind of vain the

Step 7. blowing elbow gesture istanbul mind of the vain

1. Input ' is you are again famous on this' Find the Step 3.

- a) again are famous is you on this b) on this you is famous are again c) this on you is famous are again
d) famous this on you is are again e) None of these

2. If given, Step 4 'option pen rose Seema tape yolk ', what will be the input?

- a) pen option rose tape Seema yolk b) yolk Seema tape rose option pen

Reasoning Shortcut Tricks

c) tapeSeema yolk rose option pen d) Cannot be determined e) None of these

3. Input 'no gum to sum fame game;Find the Step 1.

- a) game no gum to sum fame b) gum no to sum fame game c) game gum no to sum fame
d) Cannot be determined e) None of these

4. Input 'He is a great Indian cricketer'.Find out the last step for this input.

- a) 7
b) 6
c) 4
d) Cannot be determined
e) None of these

5. Input 'when men ten gain rain'.What would be the second step for this input?

- a) gain when men ten rain b) gain men when ten rain c) rain ten men when gain
d) Cannot be determined e) None of these

Sol:

1. Applying Rule 3. Pick Alphabetically 3 words in forward order (again, are , famous)
and place them before the remaining word that will give you :
Step 3.again are famous is you on this

2.Applying Rule 1. Hence Cannot be determined

3.Applying Rule 3. Step 1 : fame no gum to sum game Option e is correct.

4. Applying Rule 2. Total No of words = 6. $n=6$ then $n-1$ which is $6-1=5$

Hence total No of Step can be made is 5. So Option a),b) & c) is wrong.
Now Apply Rule 3

Input : He is a great Indian cricketer.

In alphabetical order : A=1 , Cricketer =2, Great =3 , He = 4, Indian =5, Is= 6

Clearly After removing 1,2,3&6 (four words) the remaining words come in order

So, Total Steps = 4, Total words Removed = 4 & Last Step = 4.

Step 4 : A cricketer great he indian is.

5. Applying Rule 3

Step need to find = 2, Total Word = 2

Input : When men ten gain rain

Now pick the word alphabetically it will be men gain,Now placed them at front in ascending order
before the other words like this : gain men and Now other words are when ten rain.

So it became Step 2: gain men when ten rain.

3. Based on Mathematical Operation

It will be better understood through an example

So lets take an example

Input : 31 45 87 54 25 68

Step 1	4	9	15	9	7	14
---------------	---	---	----	---	---	----

Reasoning Shortcut Tricks

Step 2	3	20	56	20	10	48
Step 3	961	2025	7569	2916	625	4624
Step 4	29791	91125	658503	157464	15625	314432
Step 5	6.5	9	17.4	10.8	5	13.6
Step 6	4	9	6	9	7	5
Step 7	33	47	89	56	27	70
Step 8	26	40	82	49	20	63
Step 9	93	135	261	162	75	204
Step 10	8	18	30	18	14	28
Step 11	2	1	1	1	3	2
Step 12	9	81	225	81	100	196

Step 1: Digit sum of input.

Step 2: Product of the digits of input

Step 3: Square of the each number of the input

Step 4: Cube of the each number of the input

Step 5: Each number of the input is divided by 5

Step 6: Keep adding digits till they are converted into single digit

Step 7: Each number of the input + 2

Step 8: Each number of the input – 5

Step 9: Each number of the input * 3

Step 10: Digit's sum of each number of input * 2

Step 11: Difference between digits of each number of the input

Step 12: (Digit sum of each number of input)²

4. Misc. Problems

There is no fixed pattern in regard of statement. Statement under this category will come before you as a real surprise. Such questions are complete mind games.

Input : 78 239 154 126 654
 Step I. 87 932 451 621 456
 Step II. 708 2039 1054 1026 6054
 Step III. 87 392 541 261 546
 Step IV. 7 12 15 12 65
 Step V. 780 2390 1540 1260 6540

Reasoning Shortcut Tricks

Step I. Interchanged the first and last digit of the input.

Step II. Fix the zero after the first digit of the given input

Step III. 1st digit becomes last in two-digit numbers while middle digit becomes the 1st digit in three-digit numbers

Step IV. Last digit of the given input is removed

Step V. Just specify the zero at the end of the digit of the given input.

How to solve Reasoning Puzzles Quickly

Puzzles are a curious thing; they solve so easily when solving them at home and almost always let us down in exams. Why? Have you asked yourself?

Why at home we can solve hundreds of questions without mistake and in exam we can't even make A or B sit in the correct order to actually get an answer!

Sometimes you might have encountered a situation where having solved a puzzle, when clicking on options, you find that after 2-3 questions (where you were able to find your 'correct' option), in the 4/5th questions your answer according to your arrangement is not their in the options at all!

Has anyone of you encountered such a frustrating situation? I know I have, and many of friends have too.

It all happens because of tension. At home we don't take tension = puzzles get solved correctly. In exam we take a lot of tension = puzzles get more puzzled!

So let us try not to take tension and learn how to solve puzzles in an easy manner.

1. Know your enemy – or in this case, the common puzzle structure.

Seating arrangements with Banks/Colour/Fruit/Language/State/car models etc. likes and dislikes and options.

Or, Days and subjects with the similar likes and dislikes thing. Or, maybe months/floors/single row/double row etc. with multiple likes/dislikes options.

The more complicated the better for them and worse for us!

2. Every battle has a plan – so should you!

I look at puzzles as a personal battle with the Gods of Luck, and I used to always lose – until the day I planned my puzzle solving quest.

Yes, dear readers, plan. How? Well, then read on ...

3. Read once, start drawing –

A table or a circle or a row or multiple rows...whatever as per the given question.

Do no waste time reading the whole puzzle! In the two lines, you get to know if it's a seating arrangement in circle/square/row/multiple rows etc., immediately draw the required figure.

Reasoning Shortcut Tricks

4. *Keep reading and arranging –*

Once you have the basic structure of arrangement, then keep reading and after every line, arrange the information given in that sentence.

Go one sentence at one time. Arrange the information given in one sentence and only then move on the next one.

5. *Use tables*

To solve puzzles of days/subjects/floors/persons where there is no seating order.

This is a great way to solve puzzles – and you'll see that your questions will start looking easy once you have all the information nicely arranged in a tabulated manner.

6. *Indirect clues*

After arranging as per the direct information available in question, you'll see that some are left un-arranged.

These will require your logical reasoning abilities to be able to solve these indirect relations.

Everyone can do it. You can do it. But the difference between a successful candidate and the unsuccessful one is – presence of mind/clarity of thinking/ and keeping calm and composed.

That said, here is one practice question to help you kick start your battle against the puzzles!

EXAMPLE

Four people were being interviewed for the same job, on the same day but in different rooms(R1, R2, R3 and R4), at different time and by different interviewers.(First sentence – what do you do? Make a table!)

Determine which candidate was interviewed by whom, at which time and in which room.(What can be arranged first in the table? What can logically be the first coloumn? – Room numbers, because other information cannot be logically arranged!)

(i) Teena's appointment was just after Mr. Sharma's, which was just after that of the person in room R2.

(ii) Mr. Narurkar's appointment was atleast two hours later than Bimal's.

(iii) Mr. Joshi's appointment was just after the person who had an interview in room R4, who had an appointment just after Chirag.

(iv) Three of the four people were: (1)Deepak, (2) the one with interview in room R1, and (3) the one who was interviewed at 1 p.m.(this is a crazy one!)

(v) Interview times were – 11 a.m., 12 noon, 1 p.m., and 2 p.m.(This could be a row heading.)

(vi) Sharma, Narurkar, Joshi and Zaidi were interviewers and Teena, Bimal, Chirag and Deepak were the interviewees.

Reasoning Shortcut Tricks

Q1. Sharma's appointment is with

- (a) Teena
- (b) Bimal
- (c) *Chirag*
- (d) Deepak

Q2. Deepak's appointment was in room

- (a) R1
- (b) *R3*
- (c) R2
- (d) R4

Q3. Mr. Zaidi interviewed

- (a) Deepak
- (b) Teena
- (c) *Bimal*
- (d) Chirag

Q4. Who interviewed at 2 p.m.?

- (a) *Mr. Joshi*
- (b) Mr. Zaidi
- (c) Mr. Narurkar
- (d) Mr. Sharma

Q5. Which candidate was interviewed last?

- (a) *Deepak*
- (b) Teena
- (c) Bimal
- (d) Chirag

The option in *italics* is the correct answer. How many did you get right?! And a sample table of the solution:

Interviewee	Interviewer		11 a.m.	12 p.m.	1 p.m.	2 p.m.
Chirag	Sharma	R1	X	Definite	X	X
Bimal	Zaidi	R2	Definite	X	X	X
Deepak	Joshi	R3	X	X	X	Definite
Teena	Narurkar	R4	X	X	Definite	X

That's all for today friends!

Blood Relations Reasoning Shortcut Tricks

In Blood Relations certain information is given about the members of the family in the question, Based on that information we need to find out the relationship between particular member of the family. Generally the question deals with hierarchical structure which is based on seven generation three above & three below like this:

Reasoning Shortcut Tricks

Generation	Male	Female
Three generations above	Great grandfather Maternal great grandfather Great grandfather-in-law	Great grandmother Maternal great grandmother Great grandmother-in-law
Two generations above	Grandfather Maternal grandfather Grandfather-in-law	Grandmother Maternal grandmother Grandmother-in-law
One generations above	Father, Uncle, Maternal uncle, Father-in-law	Mother, Aunt Maternal aunt, Mother-in-law
Current generation(Self)	Husband, Brother Cousin, Brother-in-law	Wife, Sister Cousin, Sister-in-law
One generation below	Son Nephew Son-in-law	Daughter Niece Daughter-in-law
Two generations below	Grandson Grandson-in-law	Grand daughter Grand daughter-in-law
Three generations below	Great grandson Great grandson-in-law	Great grand daughter Great grand daughter-in-law

Important Blood Relations

Father of grandfather or grandmother	Great grandfather	Daughter of father or mother	Sister
Mother of grandfather or grandmother	Great grandmother	Son of second wife of father	Step brother
Father of father or mother	Grandfather	Daughter of second wife of father	Step sister
Mother of father or mother	Grandmother	Son/daughter of uncle/aunt	Cousin
Wife of grandfather	Grandmother	Brother of husband or wife	Brother-in-law
Husband of grandmother	Grandfather	Sister of husband or wife	Sister-in-law

Reasoning Shortcut Tricks

Father-in-law of father/mother	Grandfather	Husband of sister/sister-in-law	Brother-in-law
Mother-in-law of father/mother	Grandmother	Son of father	Oneself/Brother
Father's father/mother only	Father	Mother of son/daughter	Oneself/Wife
Only daughter-in-law of father's father/father's mother	Mother	Father of daughter/son	Oneself/husband
Husband of mother	Father	Son of son of grandmother/grandfather	Brother/Oneself /Cousin
Wife of father	Mother	Daughter of son of grandmother/grandfather	Cousin/Oneself /Sister
Second wife of father	Step mother	Son of brother or sister	Nephew
Brother of father	Uncle	Daughter of brother/sister	Niece
Brother of mother	Maternal Uncle	Grandson of father/mother	Son/Nephew
Sister of father	Aunt	Granddaughter of father/mother	Daughter or Niece
Sister of mother	Maternal Aunt	Husband of daughter	Son-in-law
Husband of aunt	Uncle	Wife of brother/brother-in-law	Sister-in-law
Wife of uncle	Aunt	Wife of son	Daughter-in-law
Son of grandfather/grandmother	Father/Uncle	Son of son/Daughter	Grandson
Daughter of father-in-law/mother-in-law of father	Mother/Aunt	Daughter son/Daughter of	Granddaughter
Father of wife/husband	Father-in-law	Son's/Daughter's grandson	Great Grandson
Mother of wife/husband	Mother-in-law	Son's/Daughter's granddaughter	Great granddaughter

Reasoning Shortcut Tricks

Children of same parents	Siblings		
Father's/Mother's only son/daughter	Oneself		
Son of father or mother	Brother		

Representation through diagram

⊕	Father-Son
⊕	
⊕	Father-Daughter
⊖	
⊖	Mother-Son
⊕	
⊖	Mother-Daughter
⊖	

#Types

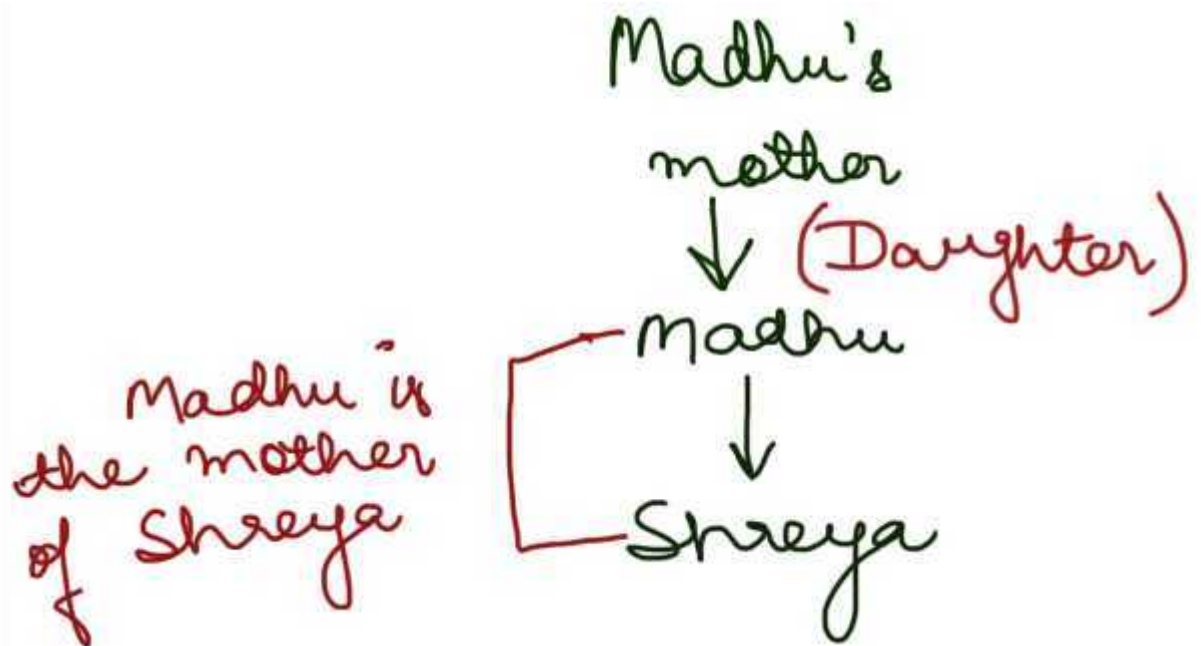
- Based on Dialogue or Conversation
- Based on Puzzles
- Based on Symbolically Coded

Conversation or Dialogue

In this type of question, the one person talking to or doing chat with other person giving information throw pointing to some picture or person.

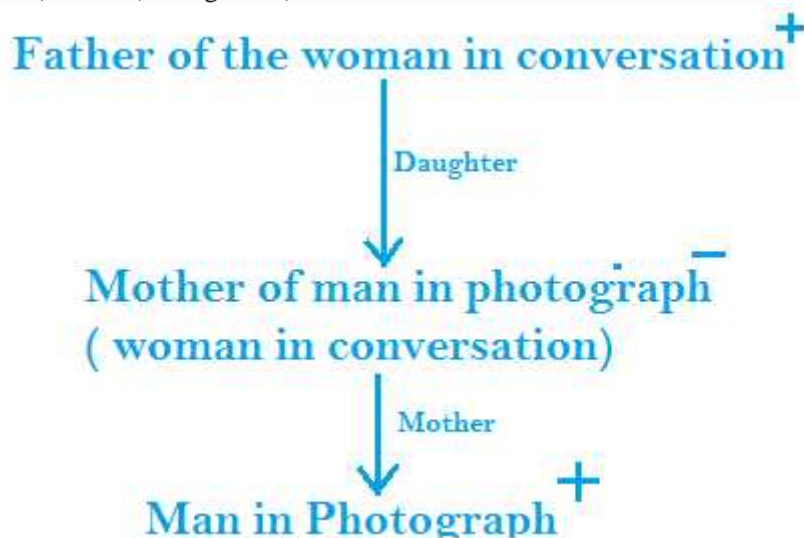
Madhu said, pointing to Shreya, "His mother is my mother's only daughter". How Madhu is related to Shreya?

- a) Father b) Son c) Grandson d) Mother e) None of these



Pointing to a man in a photograph, a man said to a woman, "His mother is the only daughter of your father". How is the woman related to the man in the photograph?

- a) Sister b) Mother c) Wife d) Daughter e) None of these



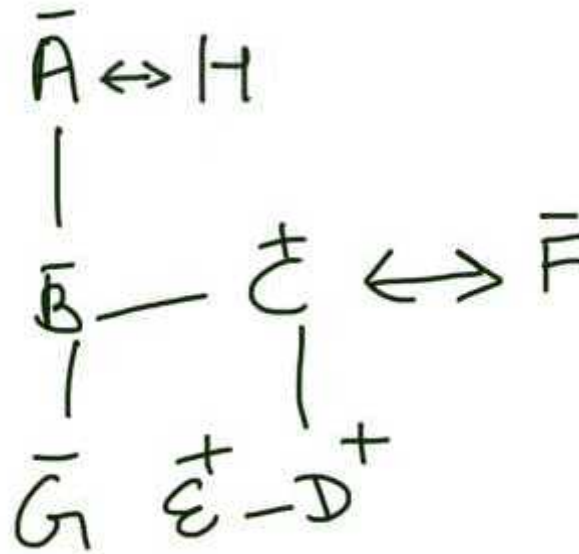
Based on Puzzles

In this type of question, You have to conclude the relation between two given person based on more than one information given in the question.

Example:

Direction:

A is the mother of B. B is the sister of C. D is the son of C. E is the brother of D. F is the mother of E. G is the granddaughter of A. H has only two children B and C.



Q1. How F related to H?

- a) Son-in-law
- b) Daughter-in-law
- c) Father-in-law
- d) Granddaughter
- e) Cannot be determined

Q2. How is C related to E?

- a) Father
- b) Son
- c) Mother
- d) Cousin brother
- e) Cannot be determined

Q3. Who is the mother of G?

- a) C
- b) B
- c) F
- d) Either B or F
- e) Either C or F

Solution

(1)

Sol: Option (b)

From the above diagram it is clear that F is daughter-in-law of H.

(2)

Sol: Option (a)

From the above diagram. It is clear that C is father of E.

(3)

Sol: Option (b)

From the above diagram it is clear that B is mother of G.

Symbols

In this type of question information are coded in the form of # \$ % & * ÷ + etc,...

Direction:

Read the following information carefully and then answer the question given below.

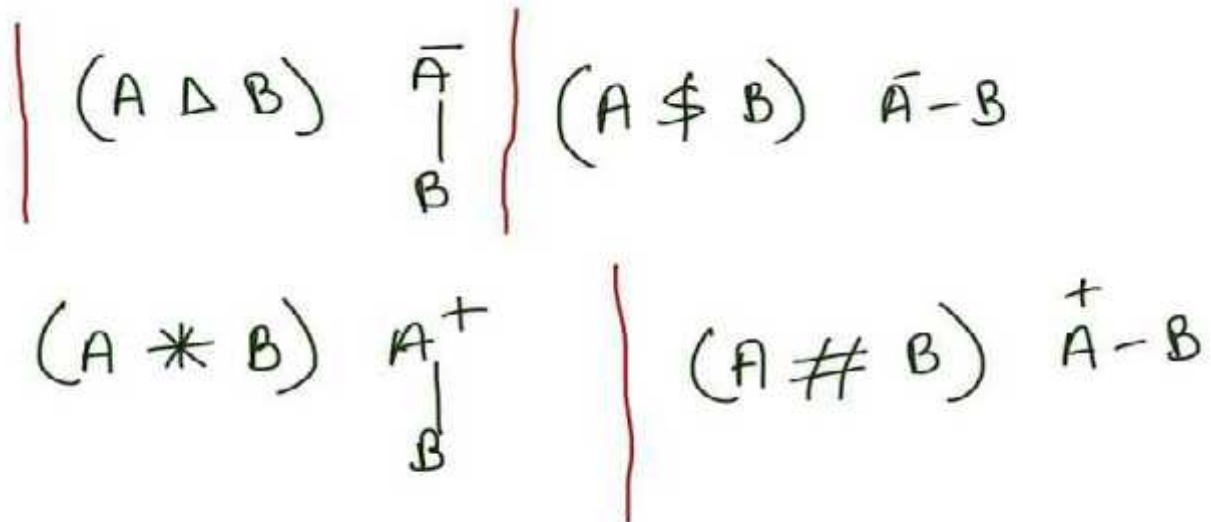
- a) A B means A is mother of B
- b) A \$B means A is sister of B
- c) A*B means A is father of B
- d) A #B means A is brother of B

Q1. Which of the following means R is uncle of T?

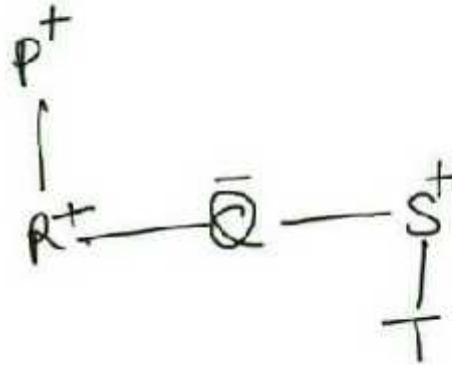
- a) R*P#S Q\$T b) S*P#R*U#T c) P*R#Q\$S*T d) P*R\$Q\$S*T e) None of these

q2. Which of the following means L is paternal grandfather of O ?

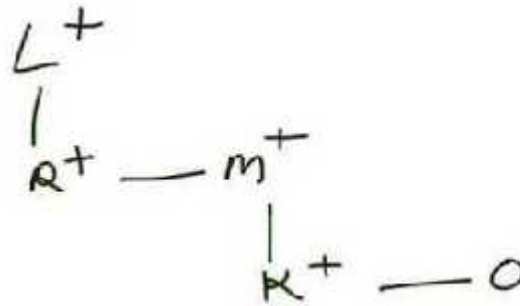
- a) L*R\$M#K#O b) R*L P#K\$O c) L*M R*K#O d) L*R#M*K#O e) None of these

Solution

c) P * R # Q \$ S * T



L * R # M * K # O



Sequence and Series - Types of Logic Used

Types of series on the basis of Logic :-

1. Simple addition and subtraction series
2. Prime number series
3. Square and cube series
4. Algebraic series
5. Misc.

Practice questions to explain the logic

1) 5, 6, 10, 19, 35, ?

$$\begin{array}{r}
 1) \ 5, 6, 10, 19, 35, (?) \\
 \begin{array}{r}
 \downarrow \downarrow \downarrow \downarrow \\
 1 \quad 4 \quad 9 \quad 16 \\
 \downarrow \downarrow \downarrow \downarrow \\
 1 \quad 4 \quad 9 \quad 16 \\
 \downarrow \downarrow \downarrow \downarrow \\
 1 \quad 4 \quad 9 \quad 16 \\
 \downarrow \downarrow \downarrow \downarrow \\
 1 \quad 4 \quad 9 \quad 16
 \end{array}
 \end{array}$$

$$\begin{array}{r}
 35 \quad \text{---} \quad ? \\
 25 \\
 35 + 25 = 60 \text{ Ans}
 \end{array}$$

2) 11, 13, 17, 19, 23, ?

All are prime numbers so next number in the series will be 29.

3) 5, 7, 10, 15, 22, ?

$$\begin{array}{r}
 3) \ 5, 7, 10, 15, 22, x \\
 \begin{array}{r}
 \downarrow \downarrow \downarrow \downarrow \downarrow \\
 2 \quad 3 \quad 5 \quad 7 \quad 11 \\
 \text{---} \text{---} \text{---} \text{---} \text{---}
 \end{array} \\
 22 + 11 = 33 \text{ Ans}
 \end{array}$$

4) 4, 9, 25, 49, 121, ?

4) 4, 9, 25, 49, 121, ?

$$\begin{array}{r}
 2^2 = 4 \\
 3^2 = 9 \\
 5^2 = 25 \\
 7^2 = 49 \\
 11^2 = 121 \\
 13^2 = 169 \text{ Ans} \\
 \uparrow \\
 \text{Prime number series}
 \end{array}$$

5) 6, 13, 27, 55, 111, ?

5) 6, 13, 27, 55, 111, ?

$$(6 \times 2) + 1 = 13$$

$$(13 \times 2) + 1 = 27$$

$$(x \times 2) +$$

$$(111 \times 2) + 1 = 222 + 1 = \underline{\underline{223}}$$

Ans

6) 3, 5, 9, 15, 23, ?

6) 3, 5, 9, 15, 23, ?

2 4 6 8 10

$$\rightarrow 23 + 10 = \underline{\underline{33}} \text{ Ans}$$

7) 13, 14, 18, 27, 43, ?

7) 13, 14, 18, 27, 43, ?

1 4 9 16 25

$$1 = 1^2$$

$$4 = 2^2$$

$$9 = 3^2$$

$$16 = 4^2$$

$$\underline{\underline{25}} = 5^2$$

$$43 + 25 = \underline{\underline{68}} \text{ Ans}$$

8) 3, 6, 18, 90, 630, ?

8) 3, 6, 18, 90, 630

$$3 \xrightarrow[\text{or } \times 2]{\text{or } \times 2} 6$$

$$6 \xrightarrow[\text{or } \times 3]{\text{or } \times 3} 18$$

$$18 \xrightarrow[\times 5]{\times 5} 90$$

$$90 \xrightarrow[\times 7]{\times 7} 630$$

$$630 \times \underline{11} = \underline{6930} \text{ Ans}$$

9) 1, 4, 27, 16, 125, ?

9) 1, 4, 27, 16, 125, ?

$$1^1 = 1$$

$$2^2 = 4$$

$$3^3 = 27$$

$$4^2 = 16$$

$$5^3 = 125$$

$$? = (6)^2$$

$$\rightarrow \underline{36} \text{ Ans}$$

10) 1, 2, 9, 4, 25, 6, 49, ?

10) 1, 2, 9, 4, 25, 6, 49, ?

$$1^2 = 1$$

$$2^1 = 2$$

$$3^2 = 9$$

$$4^1 = 4$$

$$5^2 = 25$$

$$6^1 = 6$$

$$7^2 = 49$$

$$8^1 = \underline{8} \text{ Ans}$$

Data Sufficiency Questions, Tips and Method

Data sufficiency is an important part of quantitative aptitude section of every competitive exam including IBPS, LIC, Civil services, CAT and GMAT. In almost every exam there are several questions from data sufficiency.

Most of the candidates try to solve data sufficiency questions by guess work. As every question carries same marks, questions in this part also deserve some time. Instead of guess work use a simple strategy as give below and avoid guessing the answer.

STEPS IN SOLVING DATA SUFFICIENCY QUESTIONS

- 1) Read the given problem. Don't assume anything except universal facts.
- 2) Take the first statement and combine it with main statement. Try to find the answer.
- 3) If you are unable to find the answer using 2nd step then combine second statement and combine it with main statement and try to find answer.
- 4) If you are unable to find an answer using second statement then add both statements with main statement and try to find answer
- 5) If even now you can't find answer, simply tick both statements are insufficient.

Directions :-

Marks A as answer if statement I alone is sufficient to answer the question

Marks B as answer if statement II alone is sufficient to answer the question

Marks C as answer if statement I and II together are sufficient to answer the question but neither statement alone is sufficient to answer the question

DATA SUFFICIENCY QUESTIONS AND ANSWERS

Question 1. How many people are there in the plain ?

Statement I : 25% passengers are women and 35% are children.

Statement II : There are 24 men in the plain

Answer

From Statement I we can conclude that there are 40% men in the plain but we can't find the exact number of passengers

From Statement two : Number of men passengers = 24

By combining both the statements we get, total number of passengers = $24 * 100/40 =$ (you don't need to calculate the answer)

Hence answer is C

Question 2. What is the difference between monthly income of Ram and Chaaru

Statement I : Ram earns Rs 6000 less than Shaam

Statement II : Chaaru earns Rs 6000 more than Shaam.

Answer : In this question we don't need to in depth. Simply there is difference of Rs 12000

Question 3. Is x divisible by 28 ?

Statement I : x is divisible by 20

Reasoning Shortcut Tricks

Statement II : x is divisible by 84

Answer. Using statement I - x is divisible by 4 and 5

Using statement II - x is divisible by 3, 4, and 7.

By using both statements we can conclude that x is divisible by 28 (4×7), hence answer is C.

Question 4. P, Q, R, S and T are five friends. Their mean age is 18. What is the age of R ?

Statement I : P's age is 18

Statement II : Q's age is 2 years less than T and T's age is 6 years less than S.

Statement III : R's age is 6 years more than B's age and 4 years more than T's age.

Answer : $P+Q+R+S+T = 90$

From Statement I : $Q+R+S+T = 72$

From Statement II : $Q = T - 2$ and $T = S - 6$

So $S = T + 6$

Statement III : $R = Q+6$ and $R = T + 4$

Age of every friend can be defined in terms of T's age by using all three statements. So we can reach the answer using all three statements. Hence answer is C.

TIPS TO SOLVE DATA SUFFICIENCY QUESTIONS

- Never try to reach final answer as it is not asked. You need to find whether the information provided is enough to solve the given problem or not.
- Never make any assumption. Use only universal rules { eg. $a + b = a + b - (a \cup b)$ }
- Try to solve questions by using above strategies
- Solve question step by step. First try to find answer using first statement then second and finally with both. Then mark the answer
- Even if you find answer with only one statement, then try to find answer with remaining statement as sometimes there is an option that answer can be found with both statements separately.
- Move on quickly and mark answer can't be found in case you are unable to reach any conclusion with information provided.