→ 2024 → Tomorrow Marthon
→ 2025
→ 2026
→ 2027

MBA

Data Int.

DILR

Basics of Logical Reasoning

L1

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DILR Expert

AMIT SURANA

- 10+ Years of Experience
- Aeronautical Engineer
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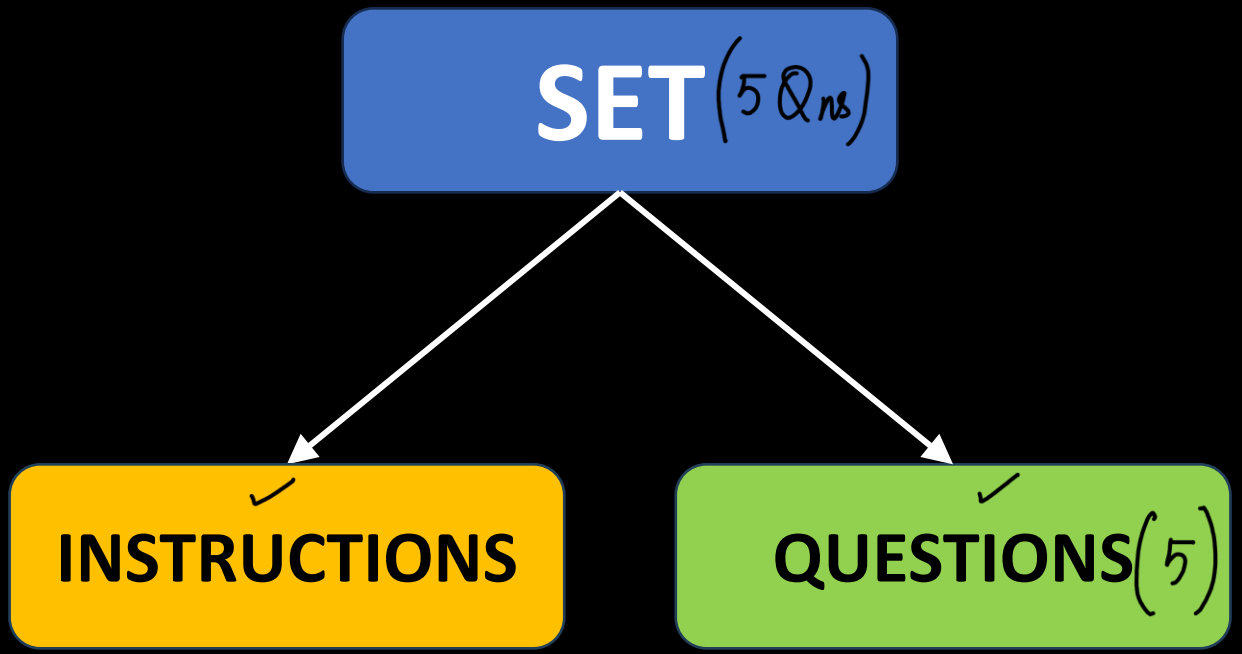
- Mentored for CAT, GMAT, GRE & OMETs

TOPICS *to be covered*

1. Basics of LR

DILR Question Format



DILR Question Format

In a square layout of size 5m × 5m, 25 equal sized square platforms of different heights are built. The heights (in metres) of individual platforms are as shown below:

6	1	2	4	3
9	5	3	2	8
7	8	4	6	5
3	9	5	1	2
1	7	6	3	9

Instruction

Individuals (all of same height) are seated on these platforms. We say an individual A can reach an individual B if all the three following conditions are met:

1. A and B are In the same row or column
2. A is at a lower height than B
3. If there is/are any individual(s) between A and B, such individual(s) must be at a height lower than that of A.

Thus in the table given above, consider the Individual seated at height 8 on 3rd row and 2nd column. He can be reached by four individuals. He can be reached by the individual on his left at height 7, by the two individuals on his right at heights of 4 and 6 and by the individual above at height 5. Rows in the layout are numbered from top to bottom and columns are numbered from left to right.

DILR Question Format

Q1. How many individuals in this layout can be reached by just one individual?

A. 3 B. 5 C. 7 D. 8

Q2. Which of the following is true for any individual at a platform of height 1m in this layout?

A. They can be reached by all the individuals in their own row and column.

B. They can be reached by at least 4 individuals.

C. They can be reached by at least one individual.

D. They cannot be reached by anyone.

Qns:

Q3. We can find two individuals who cannot be reached by anyone in

A. the last row

B. the fourth row

C. the fourth column

D. the middle column

Q4. Which of the following statements is true about this layout?

A. Each row has an individual who can be reached by 5 or more individuals

B. Each row has an individual who cannot be reached by anyone

C. Each row has at least two individuals who can be reached by an equal number of individuals

D. All individuals at the height of 9 m can be reached by at least 5 individuals

Topics in DILR

DATA INTERPRETATION

math based *

1. Tables
2. Pie Charts
3. Bar Graphs
4. Line Graphs
5. Miscellaneous Charts
6. Multiple Charts
7. Word Problems

LOGICAL REASONING

*

1. Arrangements
2. Distribution
3. Games & Tournaments
4. Maps & Networks
5. Puzzles

LR Based DI

*

1. Venn Diagrams
2. Missing Data

Notes → "PDF"

CAT → NO official syllabus

Essentials for LR

1. Reading Clues
2. Understanding the Questions
3. Understanding the Language
4. Perception
5. Focus
6. Elimination

Reading Clues

1. Direct & Relevant Clues (DRC)

Ravi sits second to the right of Raj, who sits in the left end of the row.

Raj _ Ravi _

2. Direct & Less Relevant Clues (DLC)

Rima sits next to Ritika.

Riti / Rima Rima Riti

8 cases

Rima Riti | Riti Rima Rima Riti | Rima Riti Rima | Rita

3. Indirect Clues (IDC)

-Ve Clues

Rajat does not sit at either ends of the row.

1 2 3 4 5 6 7 8

Reading Clues

1. Start with DRC.
2. Continue with DLC.
3. Eliminate multiple cases using IDC.

Example #Q 1

Five friends P, Q, R, S and T are seated on a bench facing North, not necessarily in the same order. The following information is known about the arrangement.

1. Q is not seated to the right of R.
2. R and P are neighbors.
3. R sits in the middle.
4. T sits to the immediate right of R.

Q	P	R	T	S
1. Q				S
2. S				Q

Understanding the Questions

1. Definite Question (D)

has a single answer. → perfect arrangement.

What rating did Y receive?

A. 10
B. 9
C. 6
D. 5

2. Indefinite Question (I)

multiple answers (choose the best one)
→ perfect ans.
→ incomplete ans.
→ multiple ans.

What is the minimum possible positive difference between the date of ride driven by U and Z?

A. 5
B. 6
C. 7
D. Cannot be determined

- min/max
- true/false
- -ve question
- odd one out

Understanding the Questions

DANGER!! incomplete arr.

3. Hypothetical Question (H) → multiple arr.

If "U" received a rating greater than what V did, then on which day did U get the ride assigned?

A. 11-Nov ✗
B. 12-Nov ✗
C. 25-Nov ✓
D. None of the above

A

4. Extension Question (E)

If each driver receives a bonus calculated as (10 x Rating^2), then what is the positive difference between the bonus received by X and W?

Understanding the Questions

H.I.D.E. Analysis

"HIDE"

H	Incomplete Multiple
I	~
D	complete
E	~
🚩	

- CBD
- NOTA
- All of the above
- More than one of the above
- Either this or that

Understanding the Language

1. Ordered/Unordered

A → Red, B → Yellow, C → Green, D → Blue

NOT necessary (maybe)

Each of four friends – A, B, C, D – owns one of Red, Yellow, Green and Blue cars. Unordered

Three employees – X, Y and Z – are given a bonus of 10%, 12% and 15% respectively. ordered

X → 10%, Y → 12%, Z → 15%

2. Modifier

Dhruv, (the father of Vikram,) plays Hockey.

additional info.

who, which, where

Kiran is the brother of the manager, who travels by car.

3. Continuity

The yellow house is next to the blue house and it has a green balcony.

Supplies = 40 % (Total exp)
Raw = 10 % (Total exp)

1. Changing Perception

Of the total expenditure, 40% was spent on supplies and 10% was spent on raw materials.

Total = 100 x
Supplies = 40 x
Raw = 10 x

Supplies = 40 % (Total exp)
Raw = 10 % (Supplies)

- Of the total expenditure, 40% was spent on supplies, of which 10% was spent on raw materials.

Total = 100 x
Supplies = 40 x
Raw = 4 x

1. Unwanted information

A survey of 600 schools in India was conducted to gather information about their online teaching learning processes (OTLP).

- Read everything
- Focus only on imp. ones.

The following four facilities were studied.
F1: Own software for OTLP
F2: Trained teachers for OTLP
F3: Training materials for OTLP
F4: All students having Laptops

The following observations were summarized from the survey.
1. 80 schools did not have any of the four facilities – F1, F2, F3, F4.
2. 40 schools had all four facilities.
3. The number of schools with only F1, only F2, only F3, and only F4 was 25, 30, 26 and 20 respectively.
4. The number of schools with exactly three of the facilities was the same irrespective of which three were considered.
5. 313 schools had F2.
6. 26 schools had only F2 and F3 (but neither F1 nor F4).
7. Among the schools having F4, 24 had only F3, and 45 had only F2.
8. 162 schools had both F1 and F2.
9. The number of schools having F1 was the same as the number of schools having F4.

1. Unwanted information

#Q 1. What was the total number of schools having exactly three of the four facilities?
A. 80 B. 64 C. 200 D. 50

#Q 2. What was the number of schools having facilities F2 and F4?
A. 185 B. 95 C. 45 D. 85

#Q 3. What was the number of schools having only facilities F1 and F3?

#Q 4. What was the number of schools having only facilities F1 and F4?

$F_1 \Rightarrow ?$

1. Guesstimate

R = 2D

Raj is the father of D and K. Raj is twice as old as D and thrice as old as K. D was born at least 10 years after K was born.

Which of the following could be the age of Raj?

A. 40 B. 44 C. 66 D. 77

Elimination >>> Selection (DI LR)

R = 2D

R → multiple of 2 and 3 => multiple of 6

R = 3K

Topics in LR

LR

1. Arrangements
2. Distribution
3. Games & Tournaments
4. Maps & Networks
5. Puzzles

LR Based DI

1. Venn Diagrams
2. Missing Data

Arrangements

1. Linear Arrangement
   - Horizontal
   - Vertical
2. Circular Arrangement

1	2	3	4	5
Kr$na	TBSM	Divine	Talha	47

1	Kr$na
2	TBSM
3	Divine
4	Talha
5	47

Distribution

1. Grid
2. Matrix
3. Scheduling
4. Placement

Factor 1	Factor 2	Factor 3	Factor 4

Games & Tournaments

1. Standard
   - Round Robin
   - Double Round Robin
   - Knockout
   - Seeding

2. Non-traditional
   - Sports
   - Card/Dice/Coin

Maps & Networks

1. Maps
   - Distance Based
   - Time Based
   - With/Without Diagram

2. Networks
   - Placement Based
   - With/Without Diagram

Puzzles

1. Numbers Based
2. Binary Logic Based
3. Math Based
4. Miscellaneous

%, avg, ratio, P&L, mixture, equations, variables

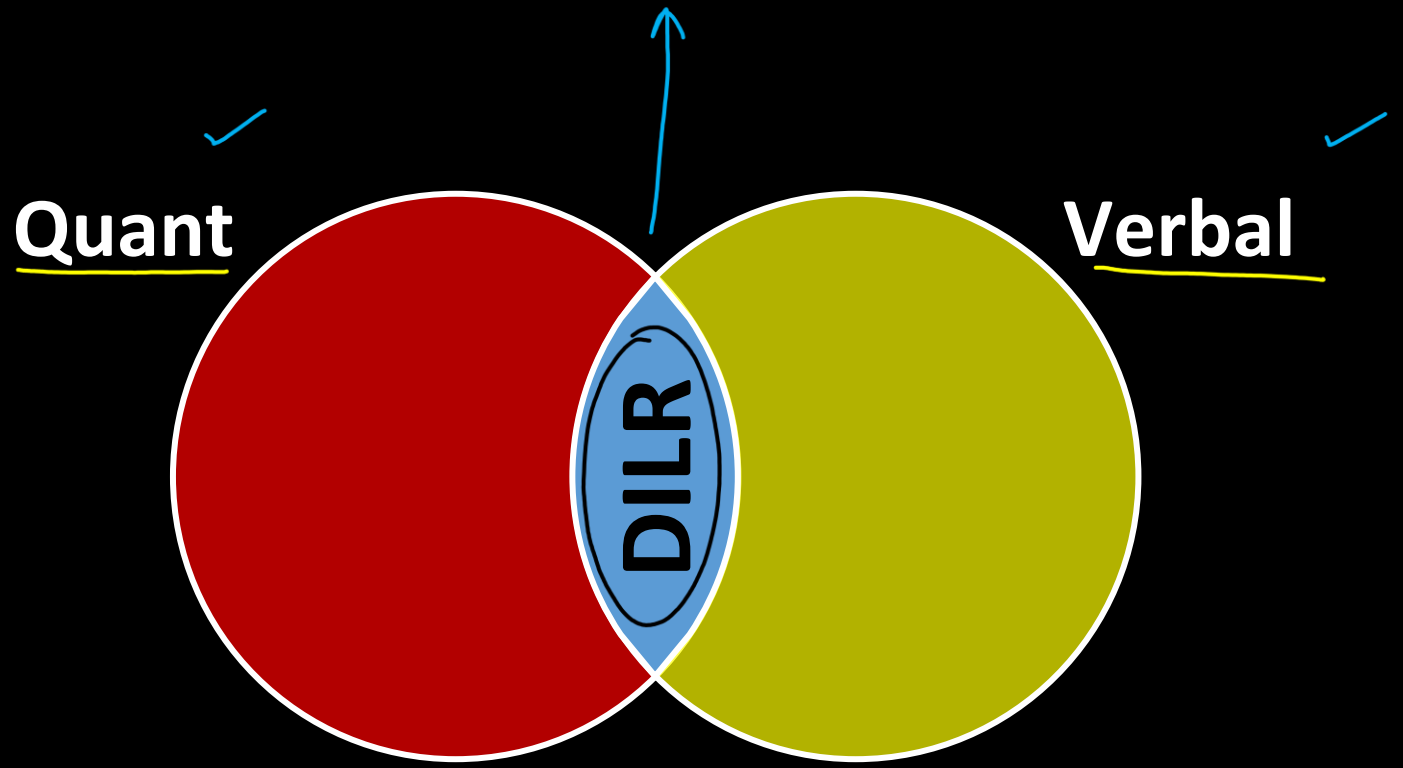
LR Based DI

1. Venn Diagrams
   - 2/3/4 set Venn Diagrams
   - Maximum/Minimum
   - Complex Venn Diagram Based

2. Missing Data
   - Table
   - Charts
   - Text

Things To Remember

1. Read the instructions, clues & conditions thoroughly to avoid silly mistakes.
2. Make a habit of writing down important & relevant information.
3. HIDE the questions immediately after reading the instructions.
4. Never judge a set by its size/looks.



Things To Follow In Class

1. BE PATIENT!
2. Accuracy > Time
3. No "repeat".
4. Don't ask "Kya yeh CAT Level set hai? Kya CAT aisa set puchega? Important topics kya hai?"
5. Solve along with me.
6. Solve by yourself again after class.
7. Solve DPPs.
8. Practice is most important!

DILR
↓
X concepts

2 Mins Summary

1. Basics of LR

Books
DI LR

→ Arun Sharma → DI, LR

→ Nishit K. Sinha

Class → Practice → DPPs ..... Books

Thank You