

1. Linear
2. Circular

Left

N
↑

Right

B A

↑ N

BCA ✓
CBA ✓

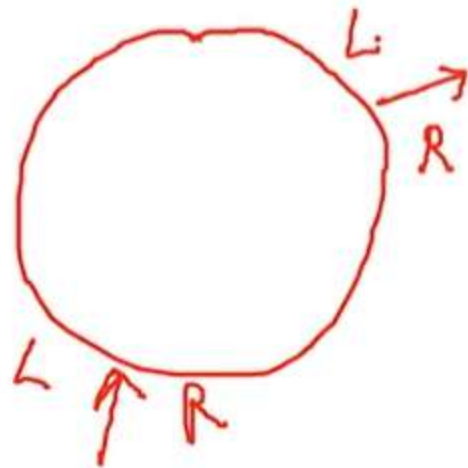
Data Arrangements and Blood Relations

Suganth Singaravelu

Right

↓
S

Left



Data Arrangements and Blood Relations

Suganth Singaravelu

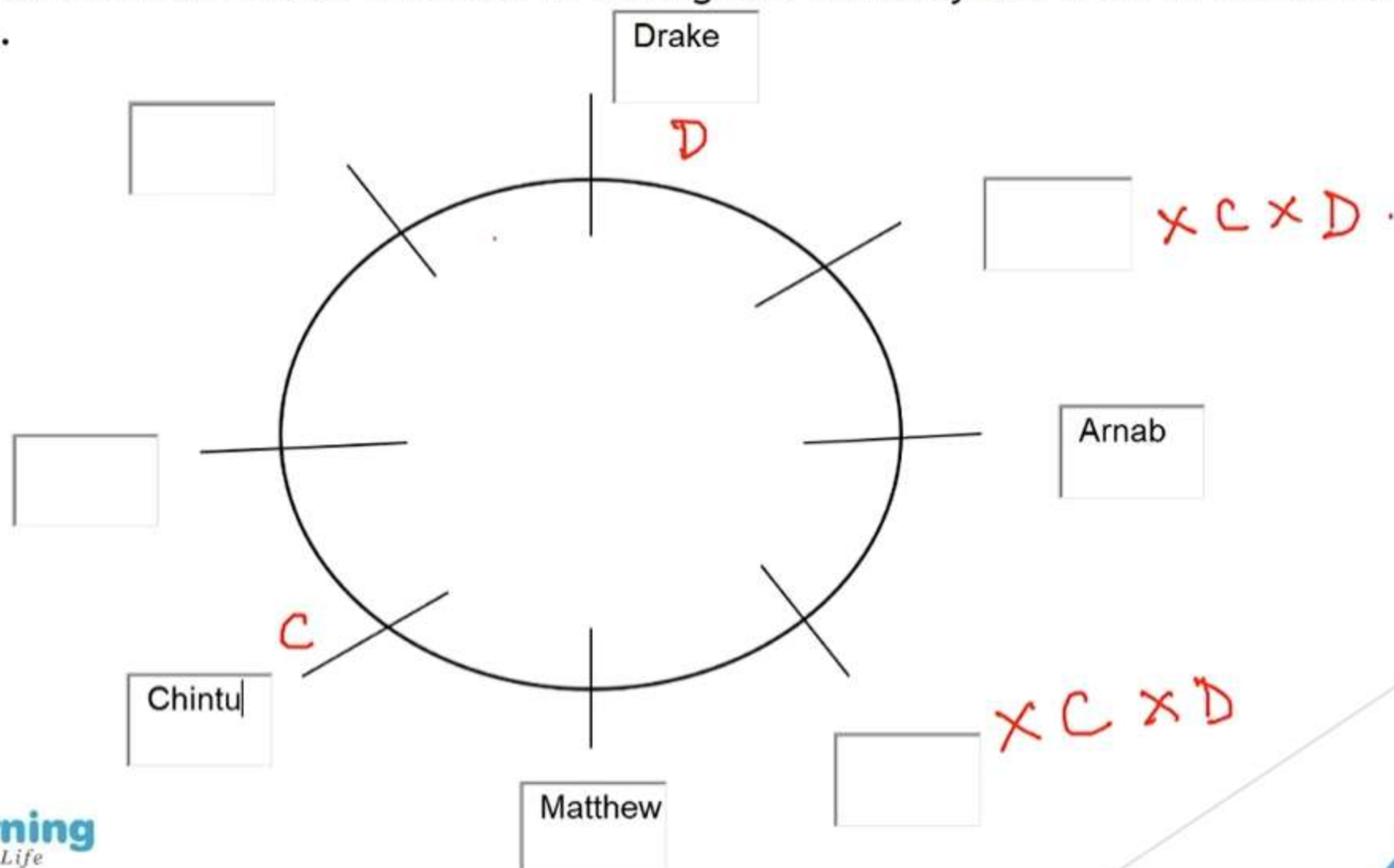
Example

5 friends are standing in a row. Rachel is not adjacent to Chandler or Ross. Phoebe is not Adjacent to Chandler, Rachel is adjacent to Monika. Monika is in the middle of the row. Who is adjacent to Phoebe?

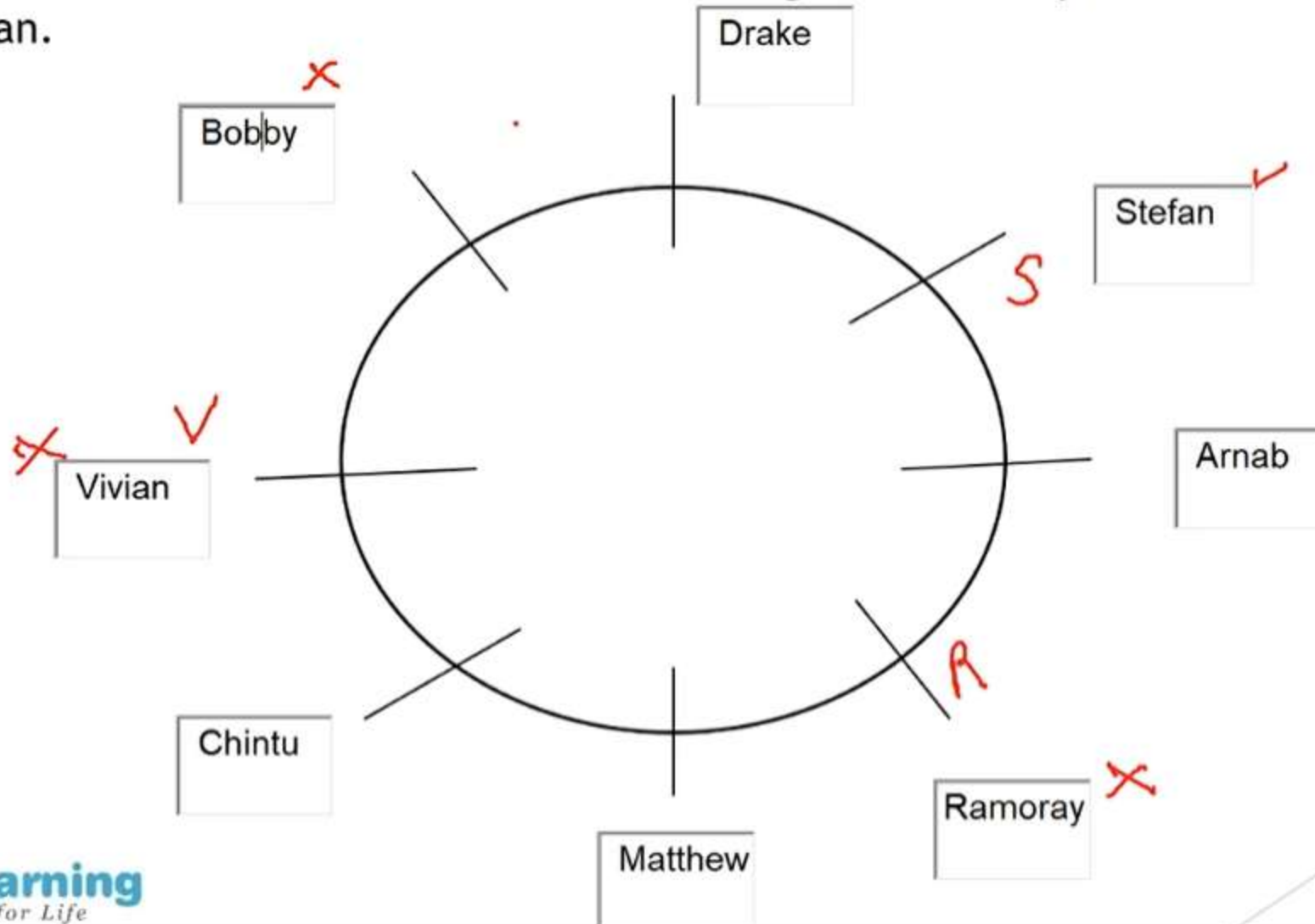
Rachel:

		Monika	Rachel	Phoebe
Phoebe	Rachel	Monika		

Eight friends Arnab, Bobby, Chintu, Drake, Ramoray, Stefan, Vivian and Matthew are sitting around a circular table facing the centre. Arnab is second to the right of Matthew, but is not a neighbour of Chintu. Drake is third to the left of Chintu but is not next to Arnab. Stefan is second to the right of Ramoray and third to the left of Vivian.



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Handwritten red notes:

$$\begin{cases} R - S \\ S - - - V \end{cases}$$




Who is second to the left of Matthew?

- a) Vivian
- b) Stefan
- c) Drake
- d) Cannot be determined

Who is to the immediate right of Drake?

- a) Ramoray
- b) Bobby
- c) Chintu
- d) Arnab

R ↓



Who is sitting opposite to Ramoray?

- a) Stefan
- b) Vivian
- c) Matthew
- d) Bobby



Eight Candidates S, T, U, V, W, X, Y and Z of different location - Bangalore, Gurgaon and Hyderabad. They enrolled for different program in GL - AI, Machine Learning, DSE, Cloud Computing, Cyber Security, Design Thinking, Software Designing and Digital Marketing. At least 2 of them are from Bangalore. W from Hyderabad, enrolled for Cloud computing. The candidate who is from Gurgaon enrolled for Machine Learning. T and Z are from the same location. Only 3 candidates are from Gurgaon. Candidate who enrolled for Design thinking is not from Bangalore. S is from Hyderabad and Y enrolled for Software designing. T is neither from Gurgaon nor from Hyderabad. X and Y are from same location. V enrolled for Machine learning. U is from the same place as of S. One candidate from Gurgaon enrolled for Cyber Security whereas S enrolled for DSE.

- At least 2 BLR
 3 Gurgaon - Machine - Cyber
 T & Z - same location X, Y
 Design X BLR





Candidates	Course	Location
S	Dse	HYD
T	AI / DM	BLR
U	Design	HYD
V	Machine learning	GUR
W	Cloud Computing	HYD
X	Cyber	GUR
Y	Software designing	GUR
Z	AI / DM	BLR



Blood Relations

Gender

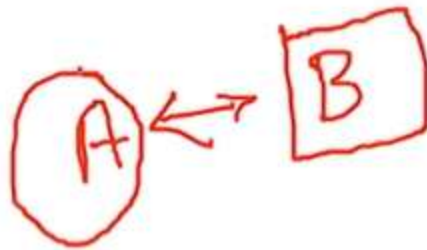


Gender	Symbol
Male	
Female	

- ▶ Assumption #1: The gender of a person has to be one of the two genders, Male or Female.

Relations

$$C \downarrow A = B$$



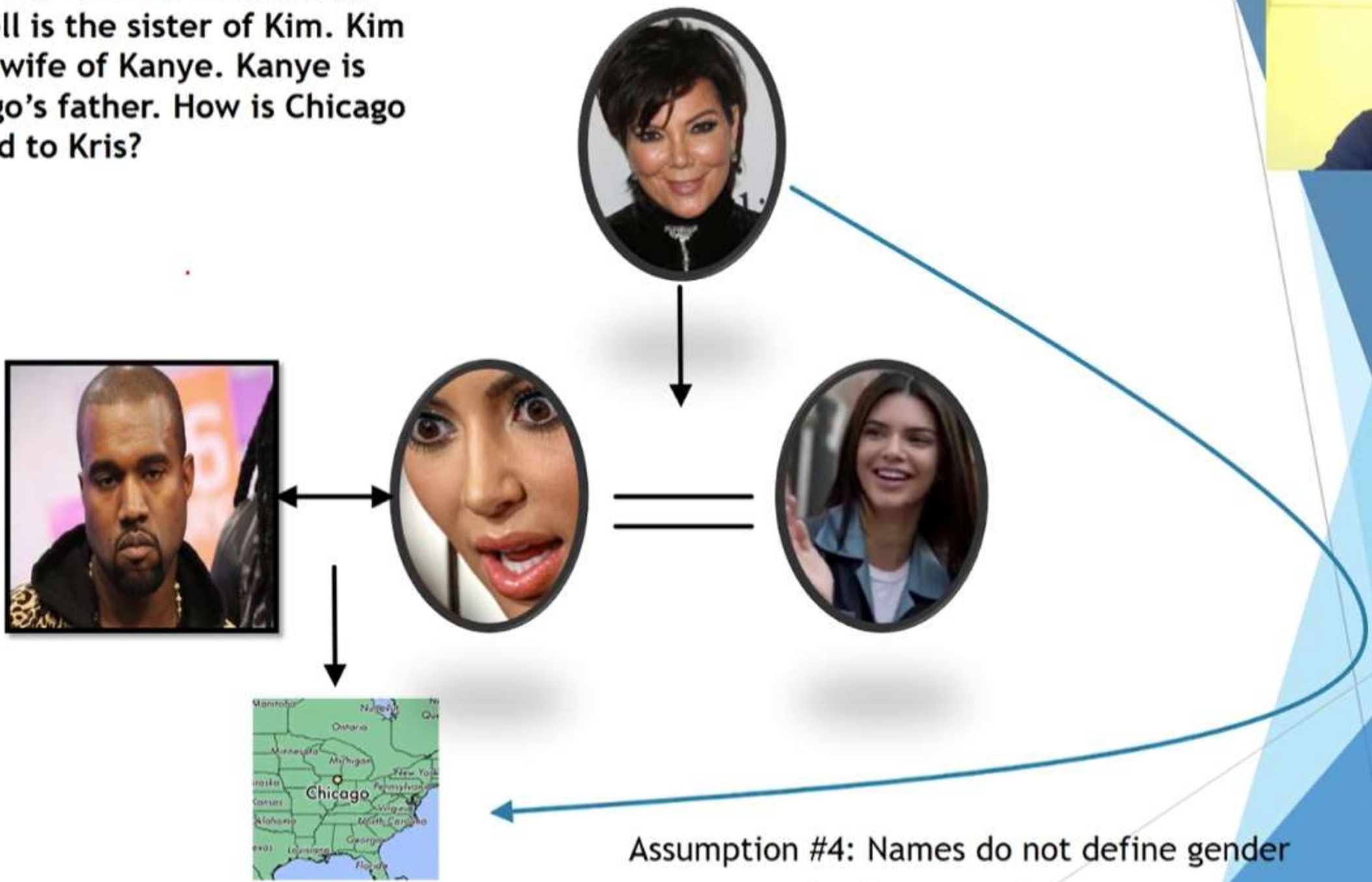
Relations	Symbol
Sibling	$=$
Spouse	\longleftrightarrow
Child	\downarrow

- ▶ Assumption #2: Common parents \longleftrightarrow Common children
- ▶ Assumption #3: A couple must have two persons of opposite gender



- Kris is the mother of Kendell. Kendell is the sister of Kim. Kim is the wife of Kanye. Kanye is Chicago's father. How is Chicago related to Kris?
- A. Grand daughter
 - B. Grand mother
 - C. Grand son
 - D. Cannot be determined

1.5
Kris is the mother of Kendell.
Kendell is the sister of Kim. Kim
is the wife of Kanye. Kanye is
Chicago's father. How is Chicago
related to Kris?



Assumption #4: Names do not define gender
Cannot be determined

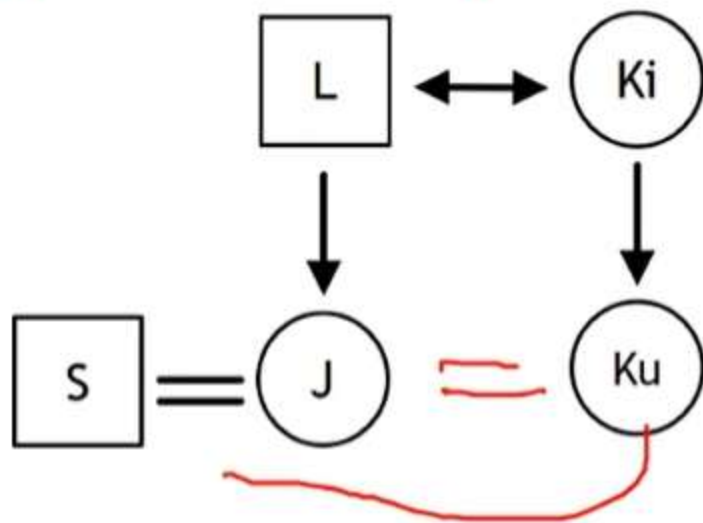


- ▶ Steve is the brother of Jim. Jim is the daughter of Lal. Lal is the husband of Kiran. Kuldeep is the daughter of Kiran. How is Kuldeep related to Steve?
- A. Brother
 - B. Sister
 - C. Uncle
 - D. Aunt

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Steve

Kuldeep

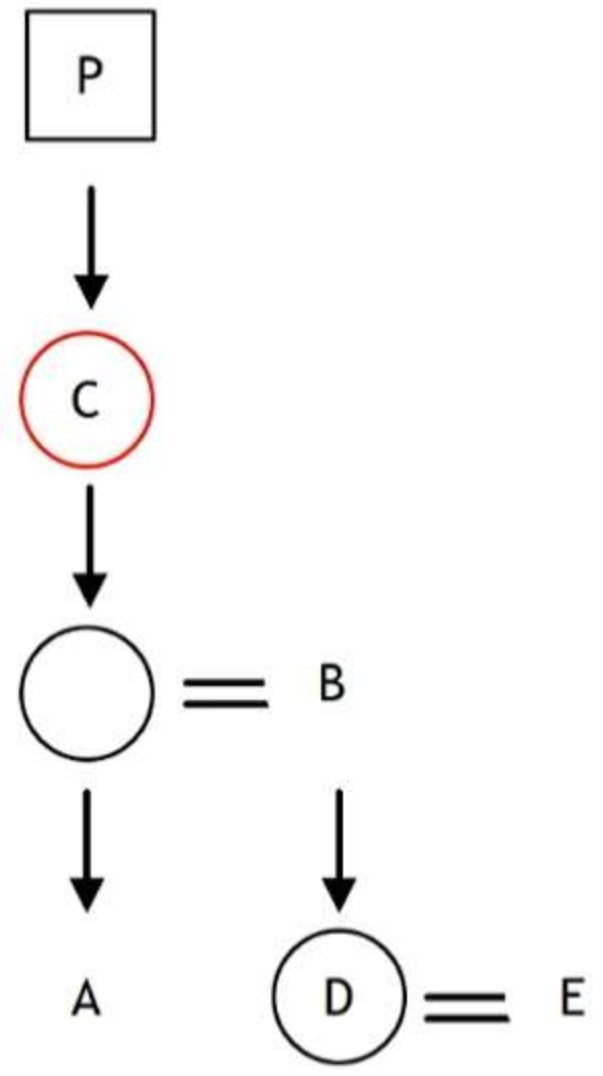


Sister



- A's mother is the sister of B and the daughter of C. D is the daughter of B and the sister of E. P is the father of C and has no sons. How is C related to E?
- A. Father
 - B. Grandmother
 - C. Grandfather
 - D. Cannot be determined

A's mother is the sister of B and the daughter of C. D is the daughter of B and the sister of E. P is the father of C and has no sons. How is C related to E?






Pointing to a Jack's wife, Sam said to her son, "She is the sister of the father of my mother's son." How is Jack related to Sam's son?

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

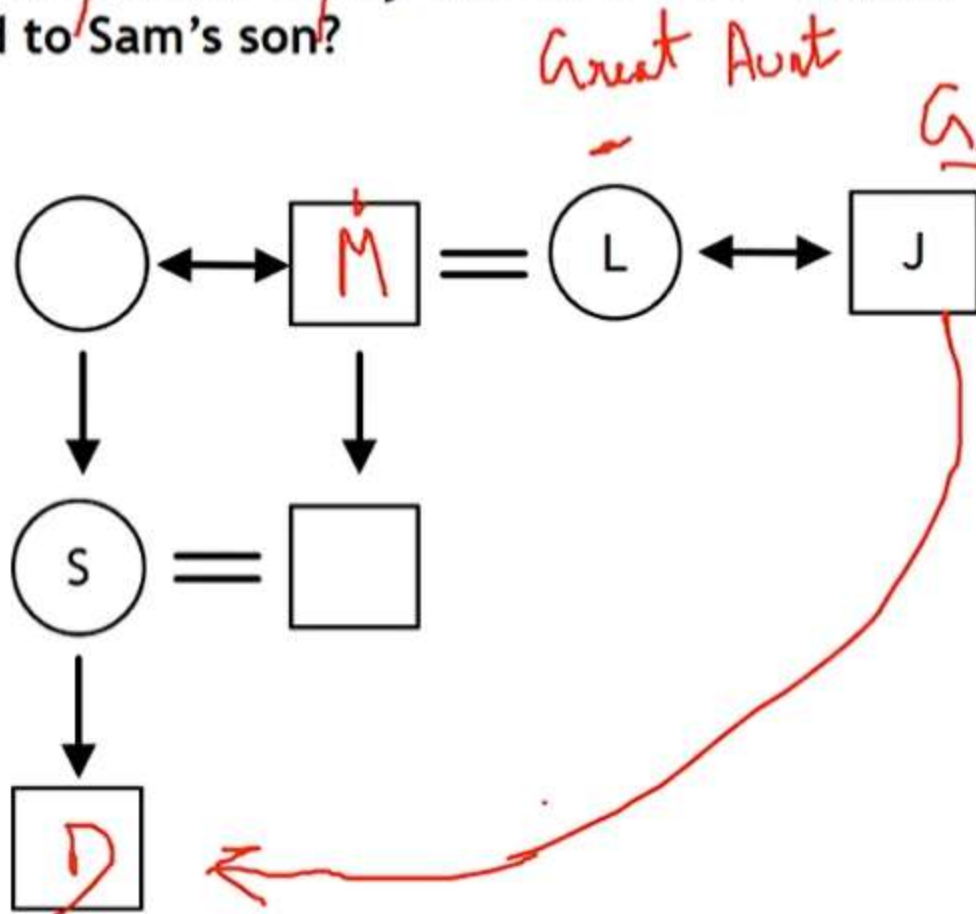


M' → F

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- B. Nephew
- C. Grandfather
- D. None of these

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None of these

Great Aunt
Great Uncle
Great Great Grand father.
Great Grand father = Great Great uncle
Grand father = Great uncle
Father = Uncle
Son
Grand Son
Great Grand Son
Great Great Grand Son.

5 sec

Coded Blood Relation.

If $A * B$ means A is the mother of B; $A \# B$ means A is the brother of B; $A @ B$ means A is the father of B and $A \$ B$ means A is the sister of B, which of the following shows that J is the maternal uncle of K?

- ~~A.~~ $K \# N * M \$ J$
~~B.~~ $J * S \$ N \# K$
 \checkmark C. $J \# M * N \$ K$
~~D.~~ $K \# S @ J$

→ Mother's side

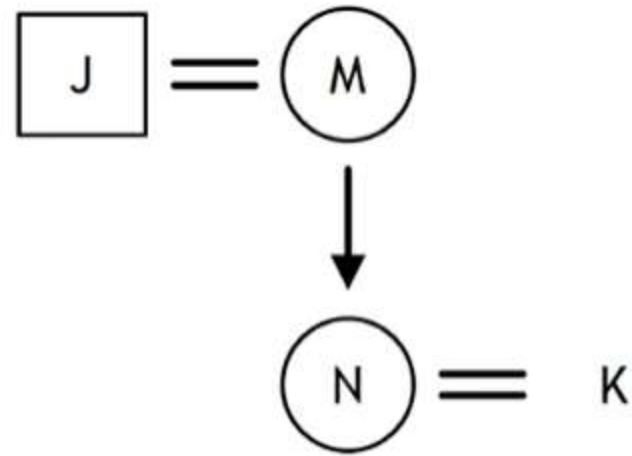
Paternal → Father's side.

Couples:

\checkmark $A @ B$ means A is brother of B
 ↑ ↑
 A B

$\boxed{A} = B$

If $A * B$ means A is the mother of B; $A \# B$ means A is the brother of B; $A @ B$ means A is the father of B and $A \$ B$ means A is the sister of B, which of the following shows that J is the maternal uncle of K?

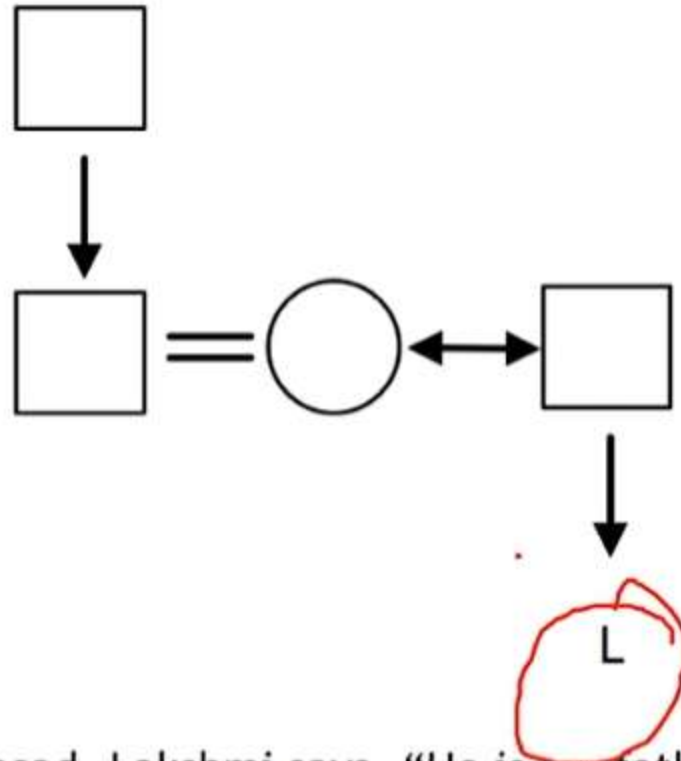


C. $J \# M * N \$ K$



Introducing Prasad, Lakshmi says, “He is my father’s brother-in-law’s father’s only daughter’s child. And my father is the only child my grandparents have.” How is Lakshmi related to Prasad?

- A. Mother
- B. Sister
- C. Daughter
- D. Cannot be determined



Cannot be determined

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