

MODULE 1 – BLOOD RELATIONS

1. Sam's father is the only son of James's father. How is James related to Sam?

- (a) Father (b) Brother (c) Uncle (d) Cannot be determined

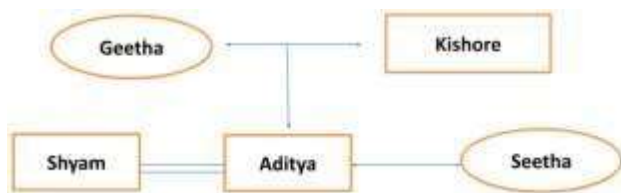
Solution:

In blood relation problems, we cannot assume the gender of the person unless it is mentioned in the question. Now in this problem, if James is a male, then he would be the father of Sam; but if James is a female, then she would be the aunt of Sam. Hence the answer is D.

2. Geetha is the mother-in-law of Seetha who is the sister-in-law of Shyam. Kishore is father of Aditya, the only brother of Shyam. How is Geetha related to Shyam?

- (a) Mother-in-law (b) Aunt (c) Wife (d) Mother

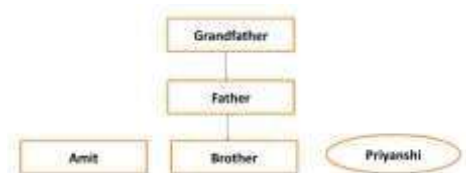
Solution:



Hence Geetha is the mother of Shyam.

3. Introducing Amit, Priyanshi said, "His brother's father is the only son of my grandfather". How is Priyanshi related to Amit?

- (a) Sister (b) Daughter (c) Mother (d) Niece



Hence, Priyanshi is Amit's sister.

Directions: Questions 4 and 5: L, M, N, O, P and Q are six members of a family. N is not the mother of M but M is the son of N. L and N are a married couple. P is the brother of N. Q is the brother of M. O is the daughter of L.

4. Which of the following is a pair of females?

- (a) L, O (b) M, O (c) N, L (d) M, L

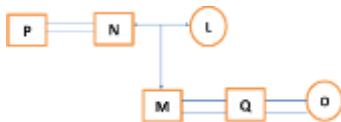
Clearly, from the family tree, the entities written in the circle are females. So the right answer to this question is option A.

5. P's wife is_____.

- (a) L (b) N (c) Q (d) Cannot be determined

Clearly, from the family tree there is no reference of P's wife given there. Hence the answer is option D.

Solution:



6. A \bowtie B means A is the brother of B; A \perp B means A is the daughter of B; A \cdot B means A is the sister of B. If A \cdot B \cdot C \perp D \perp E \bowtie F \bowtie G, then how many males and females are there respectively?

- (a) 4, 3 (b) 3, 4 (c) 5, 2 (d) Cannot be determined

Solution:

Here, G's gender is indeterminable. Hence, the answer cannot be determined. Option (d) is the answer.

7. a @ b means a is the daughter of b

a # b means a is the husband of b

a \$ b means a is the brother of b

From the above information, if A @ B \$ C @ D \$ E @ F \$ G, then what is the present generation of A? Assume that the oldest generation in this group is the first generation.

- (a) 2nd (b) 3rd (c) 4th (d) None of these

Solution:

A @ B \$ C @ D \$ E @ F \$ G means A is the daughter of B, B is the brother of C, C is the daughter of D, D is the brother of E, E is the daughter of F and F is the brother of G. Thus, if F and G are the first generation, D and E are the second, B and C are the third generation, A is the fourth generation. To solve this question in short, you only need to realize that the use of the @ sign signifies a generation

change. Since the @ sign is used thrice, A must be the fourth generation. Hence, option (c) is the answer.

8. If 'P + Q' means 'P is the brother of Q,' 'P * Q' means 'P is the wife of Q' and 'P @ Q' means 'P is the daughter of Q' then which of the following represents 'A is the son of D'?

(a) A @ C * B + D

(b) A + C @ B * D

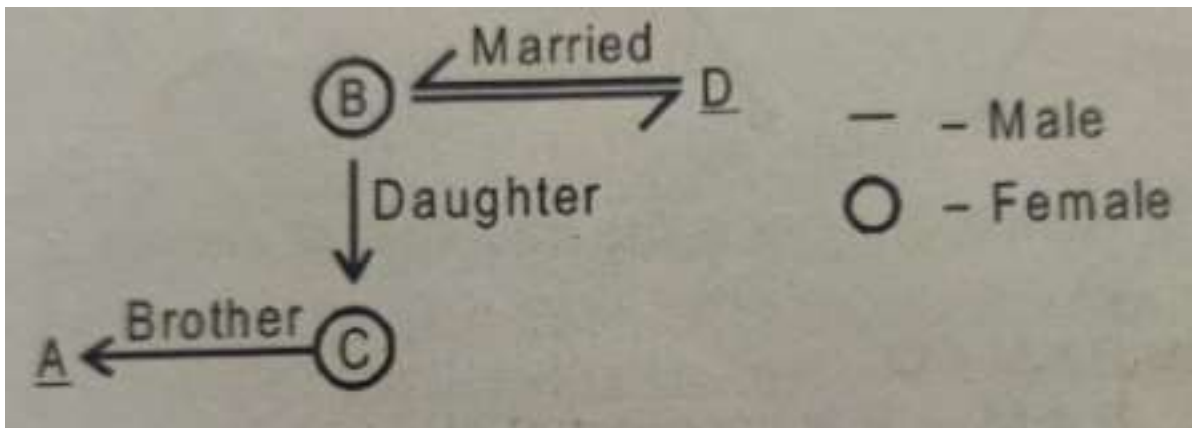
(c) A * B + C @ D

(d) A @ B * C + D

Solution:

From the question, A must be male. Going by options, choice (b) is the answer.

A @ C + B * D means A is the brother of C, who is the daughter of B, who is the wife of D. Therefore, A is the son of D.



9. If 'P + Q' means 'P is the father of Q', 'P * Q' means 'P is the sister of Q' and 'P / Q' means 'P is the brother of Q', then which of the following represents 'N is the nephew of M'?

(a) M * A / B + N

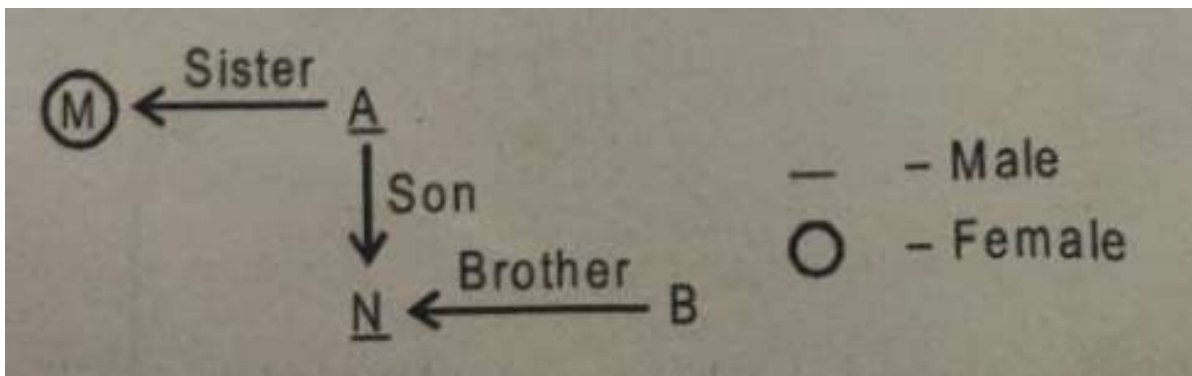
(b) M * A + N / B

(c) M / N + B

(d) N + B / M

Solution:

From the question, N must be a male and must be linked with M (where M must be his uncle or aunt). Looking at the options, we get choice (b) as the answer. As MxA+N/B would mean M is sister of A. A is father of N and N is brother of B. Therefore, N is the nephew of M. Note: If we choose option (a) we are not certain about the gender of N.

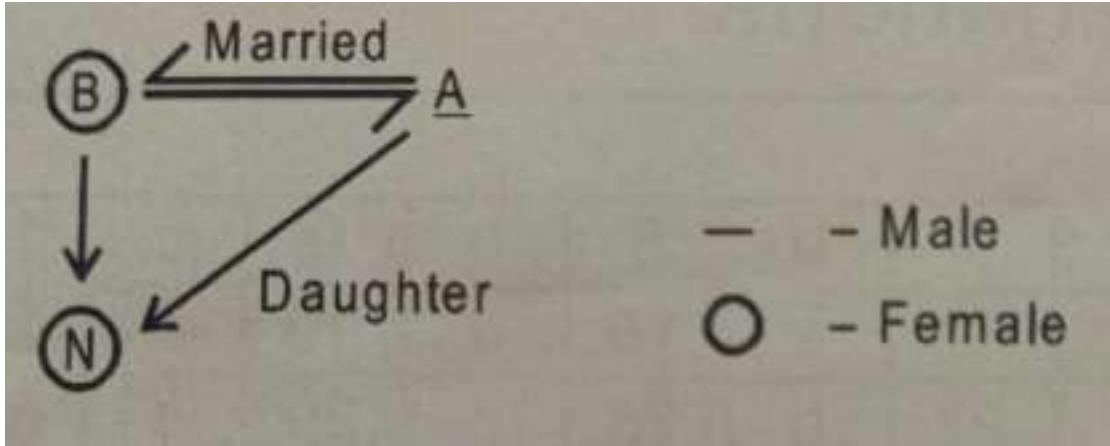


10. If 'P+Q' means 'P is the mother of Q', 'P/Q' means 'P is the daughter of Q' and 'P – Q' means 'P is the sister of Q', then which of the following represents 'A is the husband of B'?

- (a) $B + A - N$ (b) $B / A + N$
 (c) $B + N / A$ (d) $B / A / R$

Solution:

From the question, A must be male and B must be female. Going by options, we get choice (c) as the answer, i.e. $B+N/A$ means B is the mother of N and N is the daughter of A, therefore, A and B are father and mother of N respectively.



Directions: Questions 11 to 13: Amitabh has a family of eight members. Prakash is the eldest male member of the family. Radhika is the daughter-in-law of Ramya and sister-in-law of Dhanush and Surya. Apart from Amitabh and Prakash, only Dhanush is a male member in the family. Surya is the aunt of Amitabh's two daughters Diya and Anu.

11. How is Anu related to Dhanush?

- (a) Grandmother (b) Mother (c) Niece (d) Aunt

Solution: As per the figure Anu is the niece of Dhanush.

12. Find the relation between Radhika and Diya?

- (a) Sister-in-law (b) Aunt – Niece
 (c) Grandmother – Granddaughter (d) Mother – Daughter

Solution: As per the figure, Radhika and Diya are Mother and Daughter.

13. Who is the husband of Radhika?

- (a) Amitabh (b) Dhanush (c) Prakash (d) Cannot be determined

Solution: As per the figure Amitabh is the husband of Radhika.

Directions for the Questions 14 and 15: Study the following information carefully and answer the questions given.

A, B, C, D, E, F and G are seven members in a family, out of which there are four males and three females. There are two singers, two dancers, one painter, one actor and one writer. No lady is either a painter or an actor. C is a dancer and is married to A, who is a painter. F, the actor, is married to D, who is neither a dancer nor a writer. No two ladies have the same profession. B is the sister of G, who is a singer.

14. What is E's profession?

- (a) Singer (b) Dancer (c) Singer (or) Dancer (d) Data Inadequate

15. Which of the following is the group of males?

- (a) A, B, F and G (b) E, F, D and G
(c) A, C, E and F (d) A, E, F and G

Solution:

From the clues we can see that no lady is either a Painter or an Actor. Hence these have to be males. Now since A is a male, C is a female because C is a Dancer and is married to A. F the Actor is married to D. Hence F is a male and D is a female so D cannot be Painter or Actor. It is also given that she is neither a Dancer nor a Writer. Thus, she is a Singer.

Again, B is sister of G who is the Singer. G is a male because no two females have the same profession and D is a female and a Singer. On the same grounds, B cannot be Dancer hence she is a Writer. By elimination of clues E is a Dancer and a male.

Now let us tabulate all the conclusions in a table:

Person	Profession	Gender
A	Painter	Male
B	Writer	Female
C	Dancer	Female
D	Singer	Female
E	Dancer	Male
F	Actor	Male
G	Singer	Male

16. There are 6 members (A, B, C, D, E, F) in a family who are spread across 3 generations. There are two couples in the family and no one from the third generation is married. E is the wife of C. F and B are the only people belonging to their generation and they are also a couple. There are 4 male members in the family. Which of the following must be true?

- a) D is the grandson of A

- b) A and D belong to the same generation
- c) There is no female in the third generation
- d) E is the father of F

Solution:

E is the wife of C, so E and C belong to the first generation or second generation. Moreover, since F and B belong to the same generation and are a couple they must also belong to either 1st or 2nd generation.

A and D need not necessarily belong to the same generation.

Since there are only two female members, they must be the part of 1st and 2nd generations only. Hence the third generation has no female members. Hence option C is the correct answer.

Directions: Questions 17 to 20:

Mr Rajat Chopra and his wife Nikita Chopra have 3 sons whose names are Ramesh, Suresh and Umesh. Mishra family is a neighbor of the Chopra's.

Mr Amit Mishra and his wife Neha Mishra have 2 daughters whose names are Payal and Ruchi. The two neighboring families go to Kerala for a vacation. They decided to go boating but no boat could carry more than 3 members. So they hired 3 boats. None of the children knows how to row a boat, so at least one of the adults has to be there on each boat. Moreover, no boat has all three members of the same family.

17. If the three children from the Chopra family ride in different boats, then which of the following is definitely false?

- (I) Rajat and Nikita are rowing in the same boat.
- (II) Amit and Neha are rowing in the same boat.

- (a) I Only
- (b) II Only
- (c) Both I and II
- (d) Neither I nor II

Solution:

The three boys are rowing in different boats. We know that there are only three boats and each boat can carry three persons. Hence Amit and Nikita cannot be on the same boat as that would mean that one of the boats has all the members from the Chopra family. So I is definitely false.

Statement II can be true as well as false. It can be true if the two people travel in one boat while Amit and Nikita row the other two boats. Hence nothing can be said with certainty about statement II. Thus the correct answer is option A

18. If Nikita and Amit are on the same boat, then which of the following cannot be the combination of people on any boat?

- (a) Ramesh, Neha, Ruchi
- (b) Neha, Ramesh, Suresh
- (c) Neha, Ruchi, Umesh
- (d) Neha, Suresh, Rajat

Solution:

Neha, Suresh and Rajat cannot be on the same boat. This is because we know that one of the adults has to be there on each boat.

Since Nikita and Amit are already on the same boat, Neha and Rajat have to be on the other two boats.

If they are on the same boat, then there will be no adult on the third boat. Hence, the combination mentioned in option D is not possible.

19. If Neha and Ruchi are on the same boat, which of the following could be a list of people on another boat?

- | | |
|---------------------------|--------------------------|
| (a) Ramesh, Amit, Payal | (b) Ramesh, Suresh, Amit |
| (c) Ramesh, Payal, Suresh | (d) Amit, Payal, Nikita |

Solution:

We know that none of the boats has all the members of the same family. So, each boat must have at least 1 member from each of the two families.

Neha and Ruchi are on the same boat. So, only two people from Mishra family are remaining.

Both of them need to be on different boats. Hence options A and D can be ruled out because they have Payal and Amit on the same boat.

Option C is also not possible since it does not have any adult on the boat. Thus, the only feasible option is option B

20. If Rajat and Amit are in the same boat and each of the three brothers are on different boats, then which of the following is necessarily true?

- (a) Every boat has both males and females on it.
- (b) One of the boats has only females on it.
- (c) One of the boats has only males on it.
- (d) The two sisters are on the same boat.

Solution:

If Rajat and Amit are on the same boat, then the other two boats would be rowed by Neha and Nikita. It is known that each of the brothers is on different boats. So one of them will be on Rajat and Amit's boat.

Hence there will be one boat with only males. Thus, c is necessarily true.

Directions for questions 21 to 25 : Read the following information carefully and then answer the questions based on them.

There is a family of six members A, B, C, D, E and F. There are two married couples in the family and the family members represent three generations. Each member has a distinct choice of a color amongst Green, Yellow, Black, Red, White and Pink. No lady member likes either Green or White. C, who likes Black color, is the daughter-in-law of E. B is the brother of F and son of D and likes Pink. A is the grandmother of F and F does not like Red. The husband has a choice for green color, his wife likes Yellow.

21. Which of the following is true about F?

- | | |
|-----------------------------------|-------------------|
| (a) Brother of B | (b) Sister of B |
| (c) Either sister or brother of B | (d) Daughter of C |

22. Which of the following is one of the married couples?

- | | |
|--------|-------------------|
| (a) DA | (b) AC |
| (c) CD | (d) None of these |

23. How many male members are there in the family?

- (a) Two (b) Three
(c) Four (d) Cannot be determined

24. Which of the following is the color combination of one of the couples?

- (a) Yellow-Red (b) Green-Black
(c) Red-Yellow (d) Yellow-Green

25. Which of the following is the color preference of A?

- (a) Yellow (b) Either Yellow or Red
(c) Cannot be determined (d) None of these

Solution:

Grandparents	1st Gen	Green	E male	A female	Yellow
Parents	2nd Gen	Red	D male	C female	Black
Children	3rd Gen	White	F male	B female	Pink