

(Reasoning Workbook Question)

QUESTIONS

1. A is the brother of B. B is the wife of C. C is the son of P. P is the wife of Q. What is Q of B?
(a) Mother-in-law (b) Son-in-law
(c) Father-in-law (d) Brother-in-law
2. P is Q's brother, X is P's mother, Y is X's father, Z is Q's son. How is Z related to P?
(a) Cousin (b) Grandfather
(c) Nephew (d) Uncle
3. P is Y's brother. Y is Q's father. Q and X are sisters. How is X related to P?
(a) Niece (b) Cousin
(c) Aunt (d) Nephew
4. P and Q are sisters. P is the mother of R. Q's daughter S is married with T. X is the husband of P. How is Q related to T?
(a) Mother (b) Sister-in-law
(c) Mother-in-law (d) None of these.
5. Pointing to a girl, John said, "She is the daughter of the only sister of my father." How is John related to the girl?
(a) Uncle (b) Cousin
(c) Father (d) Grandfather
6. A is the son of C; C and Q are sisters; Z is the mother of Q and P is the son of Z. Which of the following statements is true?
(a) P and A are cousins.
(b) Q is the maternal grandfather of A.
(c) P is the maternal uncle of A.
(d) C and P are sisters.
7. Ravi introduces Raman as the son of the brother of his father's wife. How is Raman related to Ravi?
(a) Son (b) Cousin
(c) Uncle (d) Son-in-law
8. P is Q's father's nephew. R is Q's cousin but not the brother of P. How is R related to P if P has only one uncle?
(a) Sister (b) Father
(c) Mother (d) Aunt
9. M is the father of O and P is the son of Q. N is the brother of M. If O is the sister of P, how is N related to Q?
(a) Daughter (b) Brother-in-law
(c) Sister-in-law (d) Husband
10. Pointing towards Neha, Dhawal says, "This girl is the daughter of only child of my father". What is the relation of Dhawal's wife to Neha?
(a) Daughter (b) Aunt
(c) Mother (d) Sister

11. H. Sahil said to a lady sitting in a car, "The only daughter of the mother of my wife is the sister-in-law of the brother of your sister". How is the husband of the lady related to Sahil?
 (a) Maternal uncle (b) Brother-in-law
 (c) Father (d) Son-in-law
12. Pointing to a man in the photograph, Priya said, "His mother's daughter is my mother". How is Priya related to that man?
 (a) Nephew (b) Sister
 (c) Wife (d) Niece
13. Pointing to a photograph, Rahul said, "She is the daughter of my grandfather's only son". How is Rahul related to the girl in the photograph?
 (a) Father (b) Brother
 (c) Cousin (d) Can't be determined
14. If 'P + Q' means 'P is the brother of Q'; ' $P \times Q$ ' means 'P is the father of Q' and 'P - Q' means 'P is the sister of Q', then which of the following relations shows that 'I is the niece of K'?
 (a) $K + Y \times I - Z$ (b) $K \times Y - I - Z$
 (c) $Z - I \times Y + K$ (d) $K + Y + Z - I$
15. If 'A \$ B' means 'B is the father of A'; 'A # B' means 'B is the mother of A'; 'A * B' means 'B is the sister of A' and 'A @ B' means 'B is the husband of A', then which of the following indicates that 'N is the grandmother of P'?
 (a) $P * Q \# M \$ N$ (b) $P @ Q \$ M \# N$
 (c) $P \# Q \$ N * M$ (d) $P * Q \$ M \# N$
16. If 'P + Q' means 'P is the daughter of Q'; 'P - Q' means 'P is the brother of Q'; 'P % Q' means 'P is the father of Q' and ' $P \times Q$ ' means 'P is the sister of Q'. Which of the following means 'I is the niece of J'?
 (a) $J - N \% C \times I$ (b) $I \times C - N \% J$
 (c) $I \times C + N - J$ (d) $J + M \times C \% I$
17. If 'A \$ B' means 'A is the brother of B';
 'A @ B' means 'A is the wife of B';
 'A # B' means 'A is the daughter of B' and
 'A * B' means 'A is the father of B',
 Which of the following indicates that 'U is the father-in-law of P'?
 (a) $P @ Q \$ T \# W * U$ (b) $P @ W \$ Q * T \# U$
 (c) $P @ Q \$ W * T \# U$ (d) $P @ Q \$ T \# U * W$
18. Read the following statements carefully:
 1. A3B means A is the wife of B.
 2. A4B means A is the brother of B.
 3. A5B means A is the father of B.
 4. A9B means A is the sister of B.
 Which of the following means F is the mother of K?
 (a) F9M4N3K (b) F5M3K
 (c) F3M5K (d) F3M5N3K

19. If $M \times N$ means M is the daughter of N; $M + N$ means M is the father of N; $M \% N$ means M is the mother of N and $M - N$ means M is the brother of N, then $P \% Q + R - T \times K$ indicates which relation of P to K?
- (a) Mother-in-law (b) Sister-in-law
(c) Mother (d) Aunt

Direction (20-21): Answer the questions based on the following information:

- (i) **A+B means A is the mother of B.**
(ii) **A-B means A is the sister of B.**
(iii) **A * B means A is the father of B.**
(iv) **A π B means A is the brother of B.**

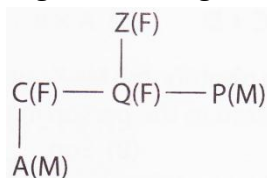
20. Which of the following means Q is the grandfather of P?
- (a) $P + N * M * Q$ (b) $Q * N * M + P$
(c) $Q\pi M\pi N * P$ (d) $Q * N * M - P$
21. Which of the following means that N is the maternal uncle of M?
- (A) $N - Y + A\pi M$ (b) $N\pi P - L + E - M$
(c) $M - Y * P - N$ (d) $N\pi C + F * M$
22. Introducing a man, a woman says, "His wife is the only daughter of my father". How is the man related to the woman?
- (a) Brother (b) Father-in-law
(c) Maternal uncle (d) Husband
23. Pointing to a woman in a photograph a man says, "She is the only daughter of my father's mother-in-law". How is the woman related to the man?
- (a) Daughter (b) Mother
(c) Daughter-in-law (d) None of these
24. If $P + Q$ means 'P is the brother of Q', $P \times Q$ means 'P is the wife of Q' and $P - Q$ means 'P is the daughter of Q', then which of the following means 'A is the niece of D'?
- (a) $A \div B \times C + D$ (b) $A \times B + C \div D$
(c) $A + C \div B \times D$ (d) $A \div C + B \div D$
25. Pointing to a photograph Mr.X said to Mr. // "She is the only daughter of the father of my mother". How is X related to the person in the photograph? **(SOFNC02016)**
- (a) Sister (b) Son
(c) Nephew (d) Brother
26. Pointing to a photograph Monika said, "He is the brother of the son of my grandfather's only child." How is the man related to Monika? **(SOFIM02016)**
- (a) Brother (b) Cousin
(c) Nephew (d) Can't be determined
27. Pointing towards a photograph, Puneet said, "She is the mother of my brother's son's wife's sister". How is the lady in the photograph related to Puneet's brother? **(SOFNC02017)**
- (a) Sister (b) Daughter-in-law
(c) Daughter (d) None of these

- 28.** If $P \$ Q$ means P is the father of Q, $P \# Q$ means P is the mother of Q and $P " Q$ means P is the sister of Q, then $N \# L \$ P * Q$ shows Q is ____ of N. **(SOF NSO 2017)**
 (a) Nephew (b) Grandson
 (c) Granddaughter (d) Data inadequate
- 29.** Pointing to a person, Puneet said, "His only brother is the father of my daughter's father". How is the person related to Puneet? **(SOF IMO 2017)**
 (a) Brother (b) Father
 (c) Uncle (d) Father-in-law
- 30.** Pointing to a woman in a photograph, a man said, "She is the only daughter of the only daughter of my brother-in-law's father". How is the woman related to the man? **(SOF IMO 2017)**
 (a) Wife (b) Mother
 (c) Daughter (d) Niece

ANSWER - KEY				
1. A	2. C	3. A	4. C	5. B
6. C	7. B	8. A	9. B	10. C
11. B	12. D	13. B	14. A	15. D
16. C	17. D	18. C	19. A	20. D
21. B	22. D	23. B	24. A	25. B
26. A	27. D	28. D	29. C	30. C

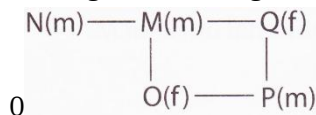
EXPLANATIONS

1. (c); B is the wife of C and C is the son of P. So, B is the daughter-in-law of P. P is the wife of Q, therefore Q is the father-in-law of B.
2. (c): Z is the son of Q and P is the brother of Q. So, Z is the nephew of P.
3. (a): Y is father of both sisters Q and X and P is brother of Y. So, P is the uncle of Q and X. Hence X is the niece of P.
4. (c): S is the daughter of Q and T is the husband of S. So, Q is the mother-in-law of T because of given that P and Q are sisters means Q is female.
5. (b); Daughter of the only sister of John -father means the girl is John's cousin.
6. (c): Let us draw generation diagram.



(M stands for male and F stands for female) We look P, Q and C are siblings & A is the son of C. So, P is the maternal uncle of A.

7. (b): Father's wife means mother; mother's brother means maternal uncle and maternal uncle's son means cousin. So, Raman is Ravi's cousin.
8. (A): P is Q's father's nephew implies P is the cousin of Q. R is also Q's cousin, but R is not the brother of P so R must be the sister of P.
9. (B): Let us draw the generation diagram.



(m stands for male and f stands for female) We see, N and M are brothers and Q is the wife of M. So, N is brother-in-law of Q.

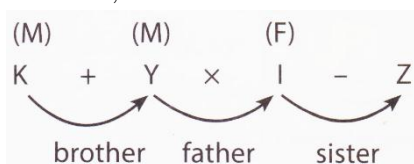
10. (c): Daughter of only child of my father means my daughter. So, Dhawal's wife is the mother of Neha.
11. (b): The only daughter of the mother of Sahil's wife means Sahil's wife. Sister-in-law of the brother of the lady's sister → lady's sister-in-law. So the lady is the sister of Sahil.

12. (d): Priya's mother's mother is the man's mother. So Priya's mother is man's sister. So Priya is the niece of the man.
13. (b): My grandfather's only son means my father. So, the girl is the sister of Rahul.
14. (a): Let us discuss option (A).

K + Y means, K is the brother of Y

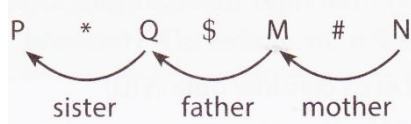
Y × I means, Y is the father of I

I - Z means, I is the sister of Z



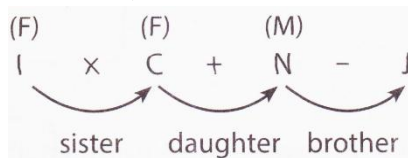
Clearly K's brother is Y and Y's daughter is I.

15. (d): Let us discuss option (D)
 $P * Q$ means, Q is the sister of P
 $Q \$ M$ means, M is the father of Q
 $M \# N$ means, N is the mother of M



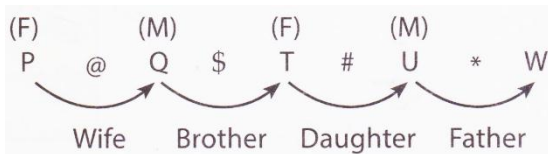
M is the father of P and N is the mother of M. So, N is the grandmother of P.

16. (c): Let us discuss option (C)
 $I \times C$ means, I is the sister of C
 $C + N$ means, C is the daughter of N
 $N - J$ means, N is the brother of J



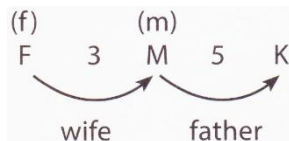
N is father of both sisters I and C and J is the brother/sister of N. So, I is the niece of J.

17. (d): Let us discuss option (D)
 We draw the diagram:

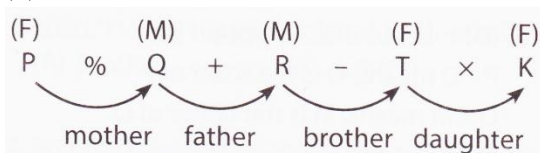


So, U is the father-in-law of P.

18. (c): Let us consider option (C), which is F3M5K



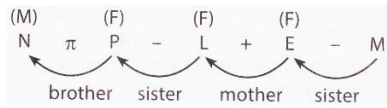
19. (a):



Moving from right to left in the diagram, we get P is the mother of K's husband.

20. (d): Let us consider option (D)
 $Q * N * M - P$
 Q is the father of N and N is the father of M. So Q is the grandfather of M who is the sister of P. Hence, Q is the grandfather of P.

21. (b): Let us consider the option (B)



Let us move from right to left.

M's sister is E and E's mother is L.

So M's mother is L. L's sister is P.

So M's maternal aunt is P. P's brother is N.

So, N is maternal uncle of M.