Chain Relation

1) If A + B means A is the mother of B; A - B means A is the brother B; A % B means A is the father of B and A x B means A is the sister of B, which of the following shows that P is the maternal uncle of Q?

   a) Q - N + M x P
   b) P + S x N - Q
   c) P - M + N x Q
   d) Q - S % P

Explanation: (correct answer - c)

P - M ⟶ P is the brother of M

M + N ⟶ M is the mother of N

N x Q ⟶ N is the sister of Q

Therefore, P is the maternal uncle of Q.

2) If A is the brother of B; B is the sister of C; and C is the father of D, how D is related to A?

   a. Brother
   b. Sister
   c. Nephew
   d. Cannot be determined

Explanation: (correct answer - d)

If D is Male, the answer is Nephew.

If D is Female, the answer is Niece.

As the sex of D is not known, hence, the relation between D and A cannot be determined.

Note: Niece - A daughter of one's brother or sister, or of one's brother-in-law or sister-in-law. Nephew - A son of one's brother or sister, or of one's brother-in-law or sister-in-law.

3) Introducing a boy, a girl said, "He is the son of the daughter of the father of my uncle." How is the boy related to the girl?

a. Brother
b. Nephew
c. Uncle
d. Son-in-law

Explanation: (correct answer - a)

The father of the boy's uncle → the grandfather of the boy and daughter of the grandfather → sister of father.

4) If D is the brother of B, how B is related to C? To answer this question which of the statements is/are necessary?

1.The son of D is the grandson of C.
2.B is the sister of D.

a. Only 1
b. Only 2
c. Either 1 or 2
d. 1 and 2 both are required

Explanation: (correct answer - d)

Given: D is the brother of B.

From statement 1, we can detect that D is son of C (son of D is the grandson of C).

From statement 2, we can detect that B is 'Female' (sister of D).

Therefore, B is daughter of C.

5) A and B are children of D. Who is the father of A? To answer this question which of the statements (1) and (2) is necessary?

1. C is the brother of A and the son of E.

2. F is the mother B.

a. Only (1)
b. Only (2)
c. Either (1) or (2)
d. (1) and (2) both

Explanation: (correct answer - b)

A and B are children of D.

From (1), C is the brother B and son of E.

Since, the sex of D and E are not known. Hence (1) is not sufficient to answer the question.

From (2). F is the mother of B. Hence, F is also the mother of A. Hence D is the father of A.

Thus, (2) is sufficient to answer the question.