1. Eight friends i.e. A,B,C,D,M,N,O and P are seating in a row and some are facing towards north and some are facing towards south direction, they like different sports Hockey, Chess, Polo, Golf, Cricket, Football, Bowling and Tennis (not necessarily in same order). M sits at one of the extreme ends of the row. N, who doesn't like tennis sits second place away from O. Only two people sit between N and A. The one who likes cricket sits immediately right of the one who likes football. A doesn't sit near to O. B, who likes bowling sits at extreme ends. C doesn't sit just near to M.D faces opposite direction of O. The one who likes hockey is an immediate neighbour of D. The immediate neighbour of D face opposite direction as D faces. P and N face opposite direction of O, but P doesn't face north. The one who sits second right of B likes polo. A and C face same direction with respect to each other whereas O sits second to the left of M. P doesn't like cricket.

2. Twelve people are sitting in two parallel rows containing six people each, in such a way that there is an equal distance between adjacent persons, in row 1, P, Q, R, S, T and V are seated and all of them are facing south. In row 2, A, B, C, D, E and F are seated and all of them are facing north. Therefore, in the given seating arrangement each member seated in a row faces another member of the other row.
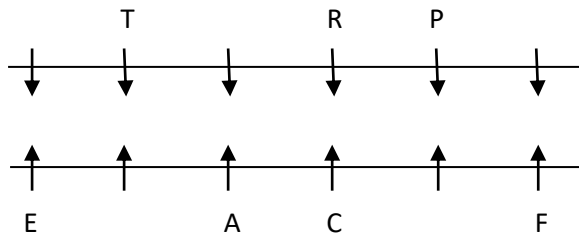
P sits third to the left of T. Neither P nor T sits at an extreme end of the line. A sits second to the right of E. Neither A nor E faces T or P. A does not sit at an extreme end. R does not face A and R does not sit at an extreme end of the line. Only one person sits between F and C. Neither F nor C sits in front of T. C does not sit at an extreme end. Only one person sits between V and Q. F is not an immediate neighbour of B and A does not face V.
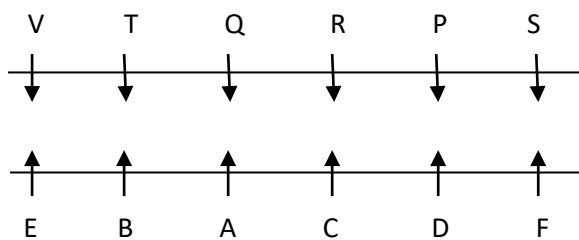
Explanation -

P sits third to the left of T. Neither P nor T sits at an extreme end of the line. Further A sits second to the right of E. Neither A nor E faces T or P. A does not sit at an extreme end. It means E sits at extreme left end of the line.
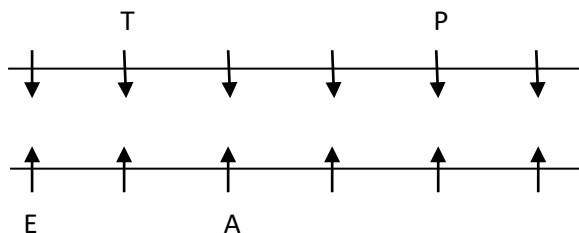
Now R does not face A and R does not sit at an extreme end of the line. It means R sits immediate right of P. Only one person sits between F and C. Neither F nor C sits in front of T. C does not sit at an extreme end. It means F sits at an extreme right end of the line.

```
        T           R      P
  ┼─────┼─────┼─────┼─────┼─────┼
  ▼     ▼     ▼     ▼     ▼     ▼


  ▲     ▲     ▲     ▲     ▲     ▲
  ┼─────┼─────┼─────┼─────┼─────┼
  E           A     C           F
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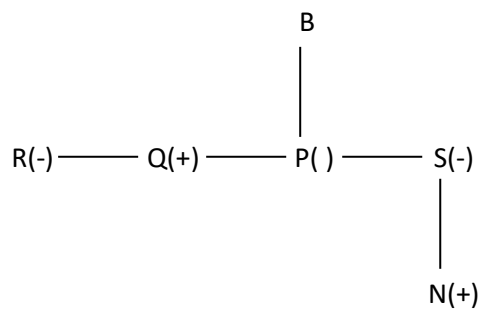
F is not an immediate neighbour of B. So B is neighbour of E and A, then D must be sitting immediate left of F. Only one person sits between V and Q. A does not face V. It means A faces Q, E faces V while F faces S.

```
  V     T     Q     R     P     S
  ┼─────┼─────┼─────┼─────┼─────┼
  ▼     ▼     ▼     ▼     ▼     ▼


  ▲     ▲     ▲     ▲     ▲     ▲
  ┼─────┼─────┼─────┼─────┼─────┼
  E     B     A     C     D     F
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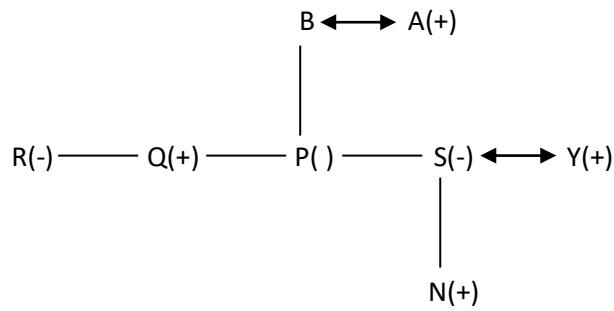
3. In a three generation family of 11 members, Q is brother of R & S. B is mother of P who has only one brother. X had only 2 daughters and Y has only one son. N is son of S and nephew of P and Q. L & M are granddaughter of A and niece of S. The gender of X is male and P has no child. Y is the son in law of A.

Explanation -

Q is brother of R & S. N is son of S and nephew of P and Q. It means P, Q, R and S are siblings. Now it is given that B is mother of P who has only one brother. It means R and S are female.

```
                        B
                        │
                        │
  R(-) ───── Q(+) ───── P( ) ───── S(-)
                                    │
                                    │
                                    │
                                   N(+)
```

Given P has no child. Y is the son-in-law of A. It means Y is male. Y has only one son. It means Y is father of N and A is father of P, Q, R and S.

```
                              B ◄──────► A(+)
                              │
       R(-) ──── Q(+) ──── P( ) ──── S(-) ◄──────► Y(+)
                                        │
                                        │
                                      N(+)
```

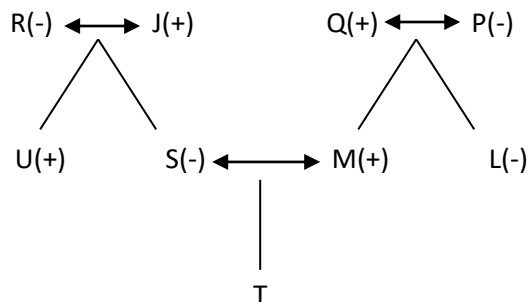The gender of X is male. L & M are granddaughter of A and niece of S. It means X is husband of R and has two daughters L and M. Hence following is the final family tree:-

```
                              B ◄──────► A(+)
                              │
  X(+) ◄────► R(-) ──── Q(+) ──── P( ) ──── S(-) ◄──────► Y(+)
        ╱ ╲                                     │
       ╱   ╲                                    │
    L(-)   M(-)                               N(+)
```
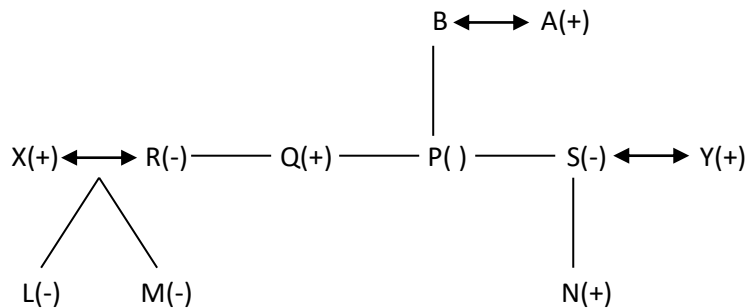
Q) Who is father of Q, How is M related to X.

Ans – A is father of Q, M is daughter of X.

4. There are 9 members in a family. U is brother in law of M. S is daughter in law of P, S is sister in law of L, R is mother in law of M, S is mother of T. P is not father of M. U is not son of P. L is daughter of Q. J is married with R. P has only two children. Only 3 married couples are in the family.

```
     R(-) ◄──────► J(+)           Q(+) ◄──────► P(-)
        ╱ ╲                          ╱ ╲
       ╱   ╲                        ╱   ╲
    U(+)   S(-) ◄──────► M(+)    L(-)
                 │
                 │
                 T
```

Q) How is Q related to T?

Ans – Grandfather.
```