Let’s denote **D(i)** as the number of passes played in i-th passing moves between Defenders. **M(i)** and **A(i)** will denote the same for midfielders and attackers respectively. Let us assume that the move string **S** is DMADADMA with **L** = 8. Let, **a**, **b**, **c** denote the number of passing moves between Defenders, Midfielders and Attackers respectively. In **S** there are 3 **D**s, 2 **M**s and 3 **A**s. So, **a=3**, **b=2**, **c=3**. The constraints are **P**, **M**, **N** and **Q**. Now, as per definition and consideration of passing from Defenders to Midfielders or Attackers without loss of generality, we can write for **S**,

D(1)+ 1+ M(1) +1+ A(1) +1+ D(2) +1+ A(2) +1+ D(3) +1+ M(2) +1+ A(3) = P ** or, **D(1)+ D(2) +D(3) +M(1) +M(2) + A(1) + A(2) +A(3) = P- (L-1), as there will be **L-1** transition passes between different possitions. Now, for each **D(i)**, **D(i)>=M** so **D(i)-M>=0** or **d(i)>=0** when **D(i)= d(i)-M**. In same manner, **m(i) = M(i)-N**, **a(i) = A(i)-Q**, **m(i)>=0**, **a(i)>=0**. Now, **D(1)+ D(2) +D(3) +M(1) +M(2) + A(1) + A(2) +A(3) = P- (L-1)** => **D(1)-M + D(2)-M +D(3)-M +M(1)-N +M(2)-N + A(1)-Q + A(2)-Q +A(3)-Q = P- (L-1)-3*M - 2*N - 3*Q** ==> **d(1)+ d(2) +d(3) +m(1) +m(2) + a(1) + a(2) +a(3) = P- (L-1) - aM - bN - cQ**, where all **d(i), m(i), (i) >=0**.

So, now the problem is converted to finding the number of ways **P- (L-1) - aM - bN - cQ** can be written as sum of **L**non-negative integers.

The number of ways of writing **r** as sum of **n** non-negative integers is **(r+n-1)C(n-1)**.

Here, **r=P- (L-1) - aM - bN - cQ**, **n=L**. So, the answer is **(r+n-1)C(n-1) = (P- (L-1) - aM - bN - cQ + L-1)C(L-1)** or **(P- aM - bN - cQ)C(L-1)**