1.Define the relation dividelist(list,list1,list2) so that the elements of list are

Partitioned between list1 and list2 are of approximately of same length.

EX-dividelist([a,b,c,d,e],[a,c,e],[b.d])

2.Define the predicate subsum(set,sum,subset),so that set is a of numbers,subset is the subset of number and sum is the sum of the numbers

In the subset.

3.Define the procedure betwwen (N1,N2,X) which for two given integers

N1 and N2,generates integer X that satisfy the constraint N1<=x<=N2.

Solution

1.dividelist([p,q,r,s],[p,r],[q,s]).

divide([],[],[])

divide([x],[x],[])

dividelist([x,y|list],[x|list1],[y|list2])

dividelist(list,list1,list2)

?-dividelist([a,b,c,d,e],[a,c,e],[b,d]).

?-dividelist([p,q,r,s],l1,l2) write(l1),write(l2)

2.subsum([],0,[])

subsum([N|list],sum[N|sub]:-sub is sum N,subsum(list,sum1,sub)

subsum([N/list],sum,sub):-subsum(list,sum,sub)

?-subsum([1,2,3,4,5],5,sub),write(sub).

3.between(N1,N2,N1):N1<N2

between(N1,N2,x):-N1<N2.Now N1 is N1 +1

between(Now,N1,N2)

?-between(2,5,x),write(x).