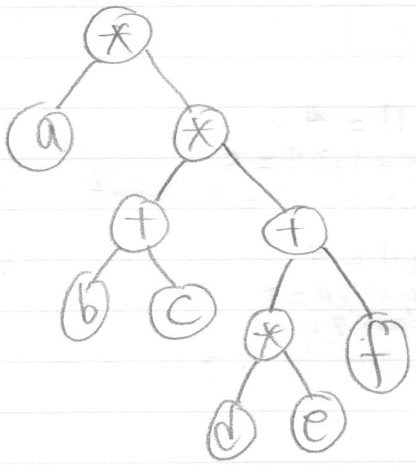
3. *a*+bc+*def

(a)



(b). Inorder sequence

a* b+c*d*e+f

4. {1, 3, 5, 7, 8, 9, 10, 11, 13, 15}.

1+15 = 3+13 = 11+5 = 7+9 = 16

Each subset consist of two integers whose sum is 16. If 7 integers are selected from X, then by the pigeon hole principle at least two must be from the same subset, and sum of these two integers in 16. Because there are more pigeons than pigeonholes, at least two pigeons must go to the same hole. Thus two integer must sent to same set, that two distinct integers in the set have sum 16. In addition, 8 and 10 do not have any value