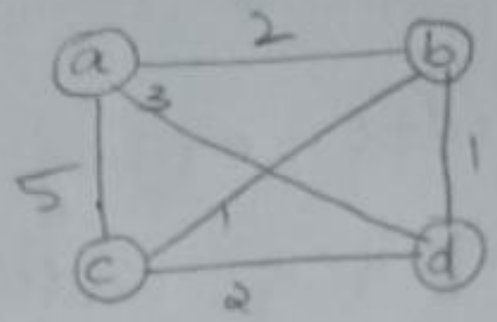
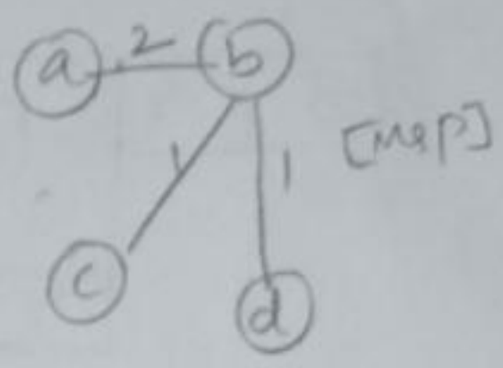
Name: S. Neda Anjum
Regno: 192311071
Subcode: CSA0672

1) Apply prim's algorithm to solve the minimum spanning tree for the given graph. Also compute the total cost of all edges.



	Q	Key	P_v
A	T	0	–
B	T	2	a
C	T	1	a b
D	T	1	d



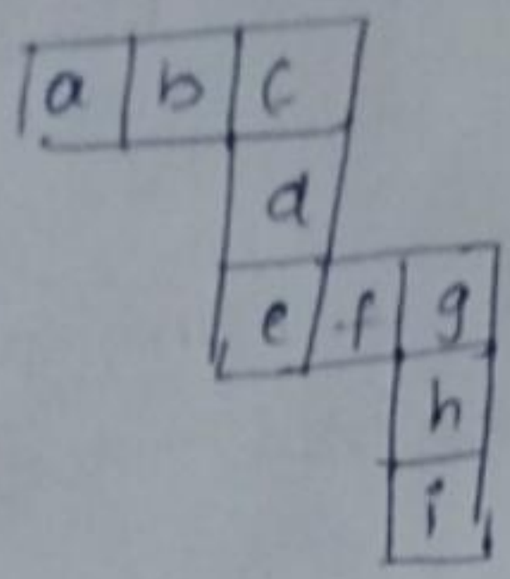
Total cost of all edges in MST = 4

2) To compute the sum of subsets for the following graph and then Satisfy the given constraints. set S{} = (a, b, c, d, e, f, g, h, i) values and are V{} y = (1, 2, 3, ... 9)

a	b	c
		d
e	f	g
		h
i		

constraints hold such as used all values only one time

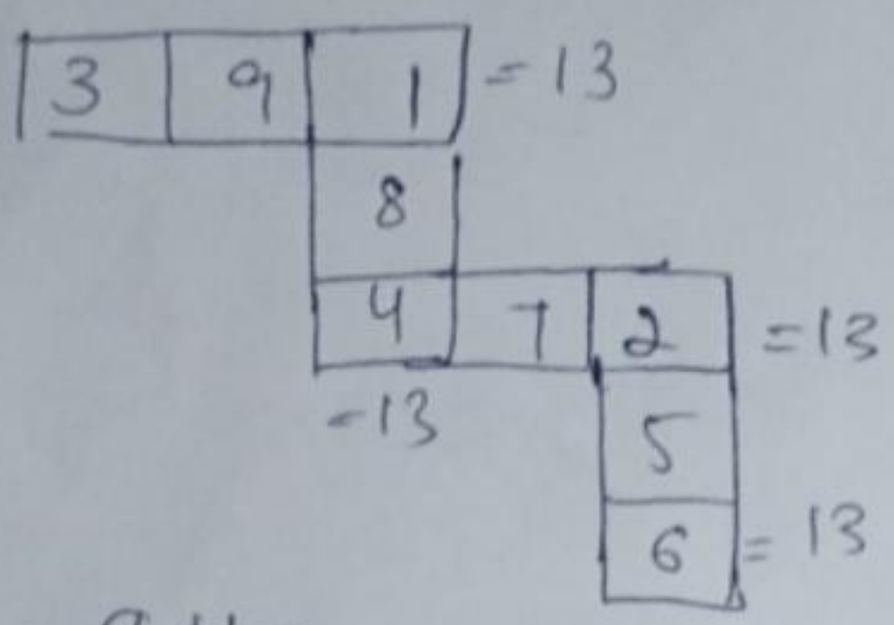
a+b+c = c+d+e = e+f+g+g+h+i



Given that $a+b+c=c+d+e=e+f+g=g+h+i$

By using the values $\{i\}$ & adding equal to other three values of sum

1)

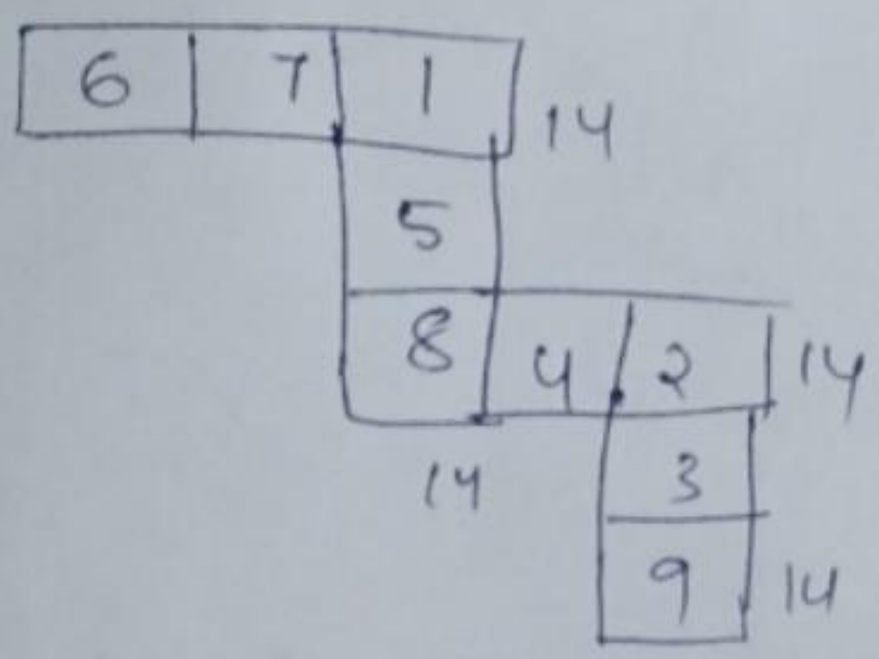


$a+b+c=c+d+e=e+f+g=g+h+i$

$3+9+1=1+8+4=4+7+2=2+5+6$

$13=13=13=13$

(2)

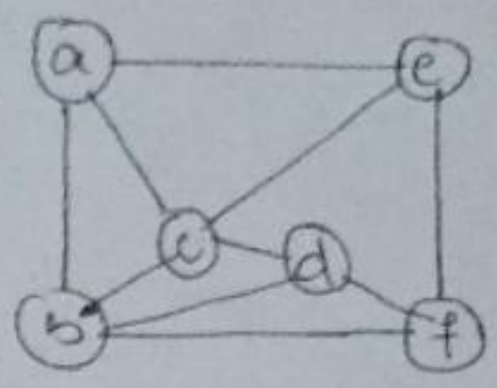


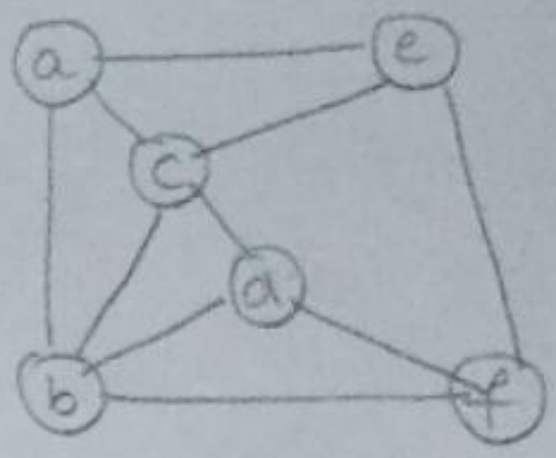
~~$6+7+1=15+8+8$~~

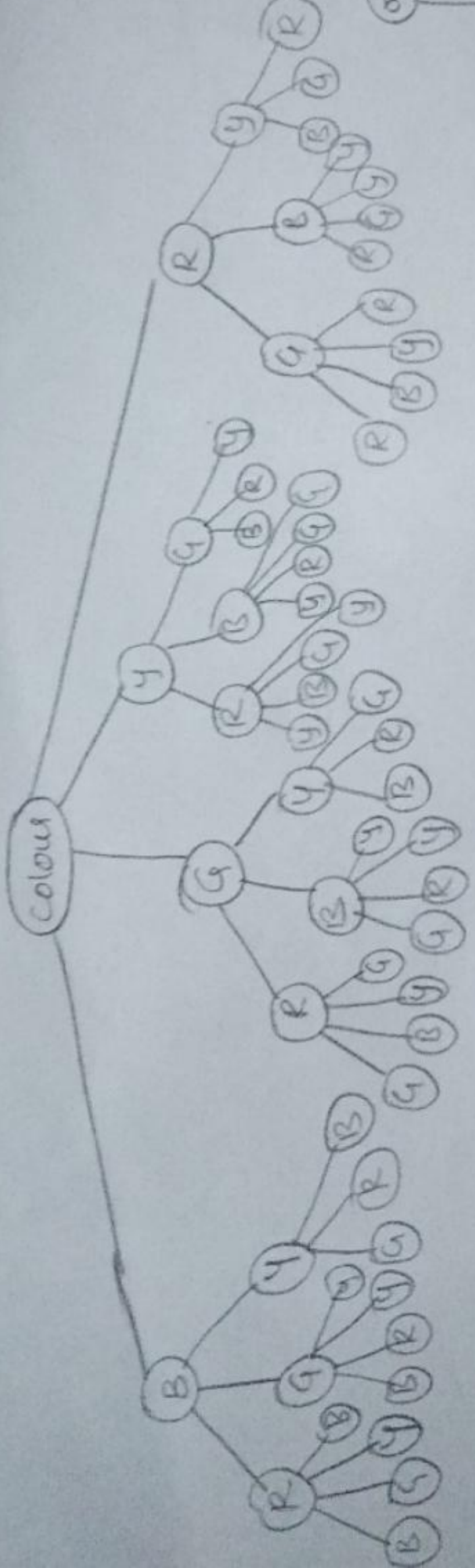
$6+7+1=1+5+8=8+4+2=2+3+9$

$14=14=14=14$

Calculate the chromatic no of number for the following graph coloring

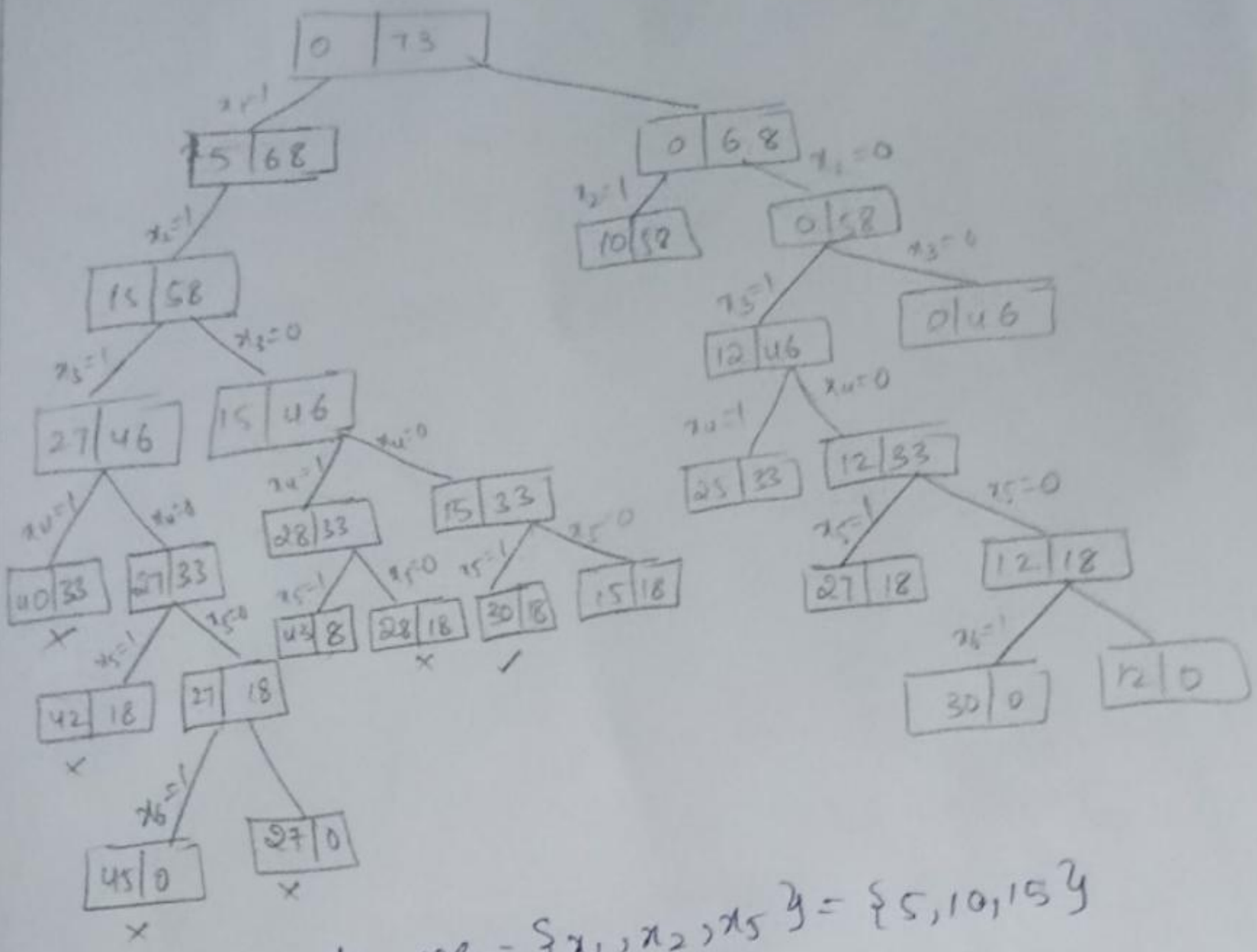






22) Consider a set $S=(5, 10, 12, 13, 15, 18)$ & $d=30$. Solve it for obtaining a sum of subset

$S=(5, 10, 12, 13, 15, 18)$; $d=30$



Subsets are $= \{x_1, x_2, x_5\} = \{5, 10, 15\}$

$\{x_3, x_6\} = \{12, 18\}$