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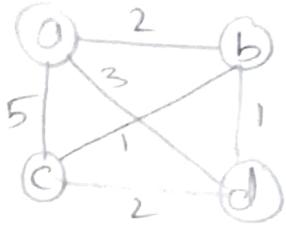
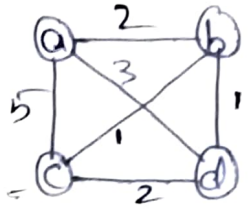
CS10669

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

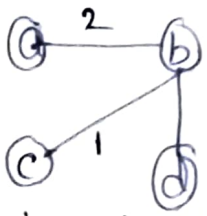


Prim's Algorithm



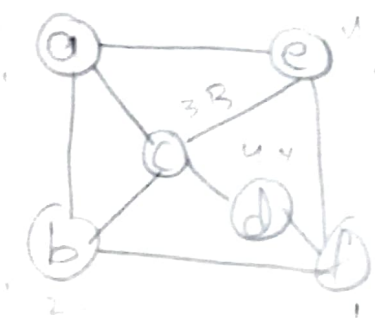
Source = A

	Q	key	P_T
a	T	0	–
b	T	2	a
c	T	~~5~~ 1	~~a~~ b
d	T	~~3~~ 1	~~a~~ b



∴ The total cost of all edges in the MST = 4//.

3) Calculate the chromatic no for the following graph. coloring.



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

Given $x_1\ x_2\ x_3\ x_4\ x_5\ x_6$

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

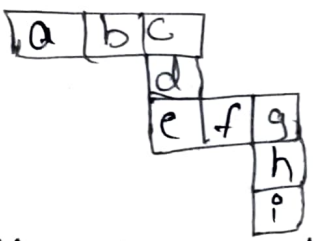
∴ Sum of subsets are = $\{x_1, x_2, x_5\} = \{5, 10, 15\}$

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

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 used are

$v\{i\} = (1, 2, 3 \text{ ---- } 9)$



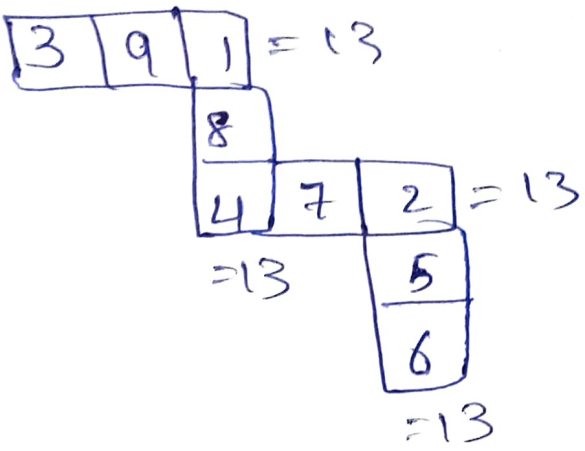
used all values only one time

constraints hold such as.

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

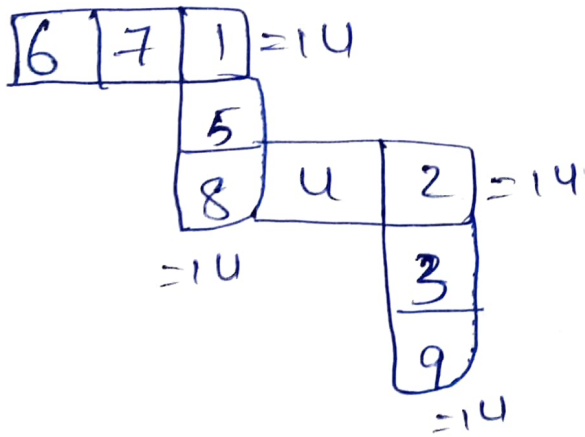
Given that a+b+c = c+d+e = e+f+g = g+h+i

By using the values of {i} and adding equal to other three values of sum.

1) 

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

13 = 13 = 13 = 13

2) 

14 = 14 = 14 = 14//.