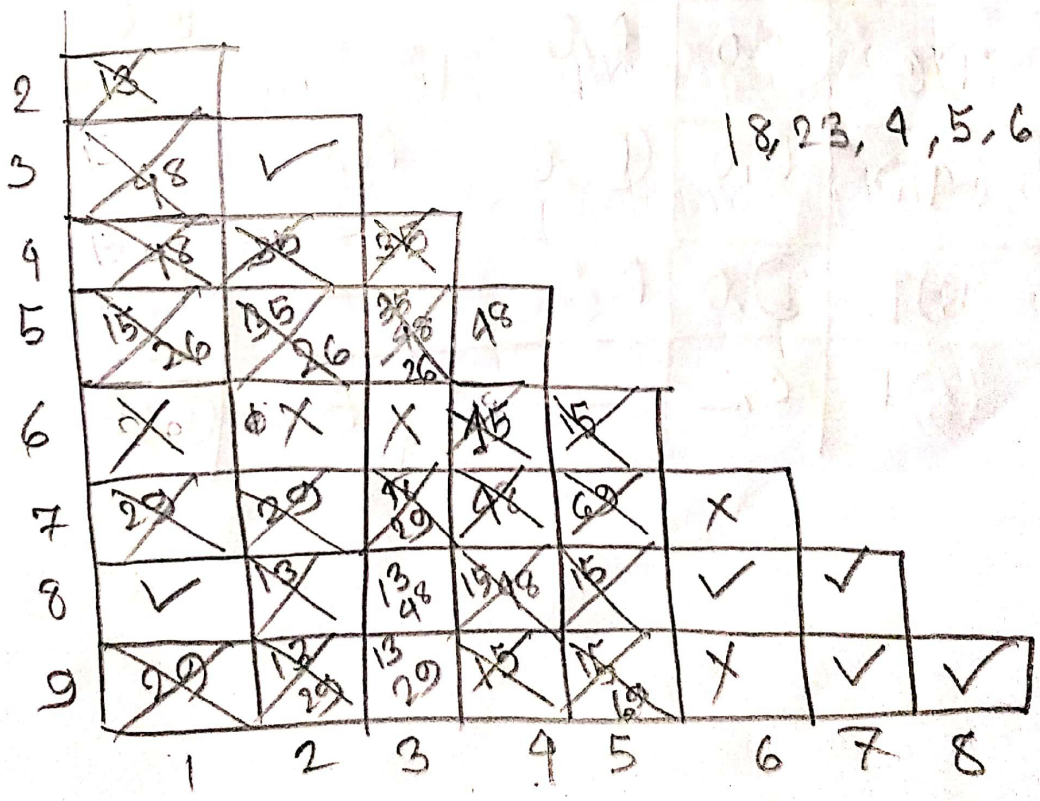
1805116

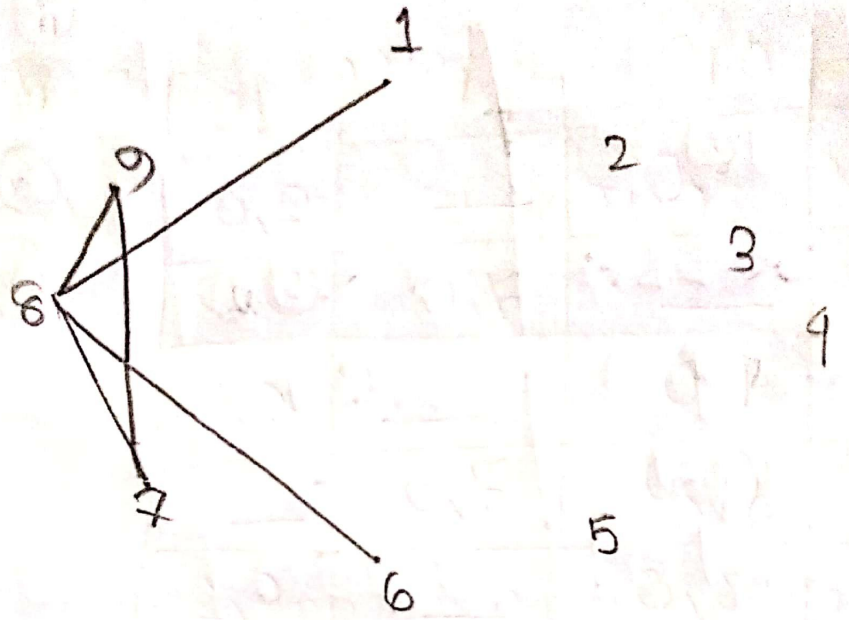
(i) $x_1 = x_2 = 0$
(ii) $x_2 = 0$ then $x_1 \to 1 \to 0$
(iii) $x_1 = 0$, $x_2 : 0 \to 1 \to 0$
(iv) $x_2 = 0$; $x_1 : 0 \to 1$ then $z =$
(v) else $z = 0$

P,S	00	01	11	10
1	1,0	8,0	—	2,0
2	3,0	—	7,0	2,0
3	3,0	4,0	—	2,0
4	5,0	4,0	7,0	—
5	5,0	8,0	—	6,—
6	1,—	—	7,—	6,1
7	—	8,0	7,0	9,0
8	1,0	8,0	7,0	—
9	1,0	—	7,0	9,0



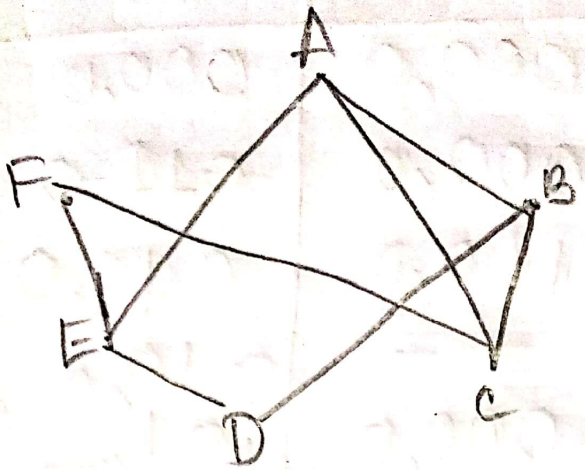
2	~~13~~							
3	~~48~~	✓						
4	~~18~~	~~35~~	~~35~~					
5	~~15~~ 26	~~35~~ 26	~~35~~ ~~48~~ 26	48				
6	~~X~~	X	X	~~15~~	~~15~~			
7	~~29~~	~~29~~	~~48~~ 29	~~48~~	~~69~~	X		
8	✓	~~13~~	13 48	~~15~~ ~~48~~	~~15~~	✓	✓	
9	~~29~~	~~13~~ 29	13 29	~~15~~	~~15~~ 69	X	✓	✓
	1	2	3	4	5	6	7	8

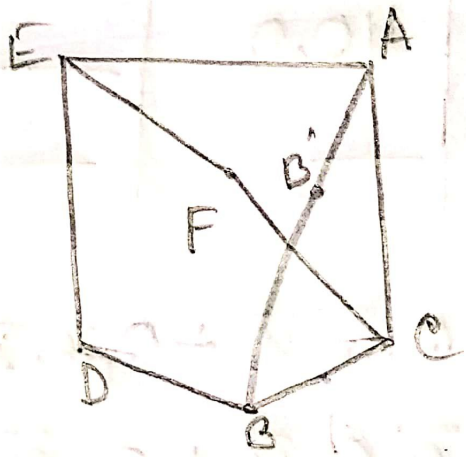
18, 23, 4, 5, 6, 789



$$\frac{(789)}{A}\quad\frac{(23)}{B}\quad\frac{(1)}{C}\quad\frac{(4)}{D}\quad\frac{(5)}{E}\quad\frac{(6)}{F}$$

ps	00	01	11	10
(789) A	C,0	(A),0	(A),0	(A),0
(23) B	(B),0	D,0	A,0	(B),0
(1) C	(C),0	A,0	—	B,0
(4) D	E,0	(D),0	A,0	—
(5) E	(E),0	A,0	—	F,—
(6) F	C,—	—	A,—	(F),1





	00	01	11	10
0	A	C	B'	B
1	E	F	13	D

A - 000
B = 010
C - 001
B' - 011
D - 110
E - 100
F - 101

PS	00	01	10	11
A-000	001,0	000,0	000,0	000,0
C-001	0010	000,0	011,0	0000
B-010	010,0	110,0	010,0	
B'-011	—	—	010,0	—
E-100	100,0	000,0	101,—	—
F-101	001,—	—	101,1	000,—
D-110	100,0	110,0	—	000,0
~~-111~~	—	—	—	—

$$D_1 = Q_2\bar{x}_1x_2 + Q_1\bar{Q}_3\bar{x}_2 + Q_1x_1\bar{x}_2$$

$$D_2 = \bar{Q}_1Q_3x_1 + \bar{Q}_1Q_2\bar{x}_2 + Q_2\bar{x}_1x_2$$

$$D_3 = \bar{Q}_1\bar{Q}_2x_1\bar{x}_2 + \bar{Q}_2Q_3\bar{x}_2 + Q_1x_1\bar{x}_2$$