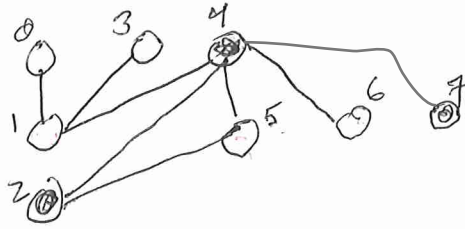


G1 = (10 0 10 0 20 10 1 21 10 1 10 1 10)
 labels 3 4 5 6 7

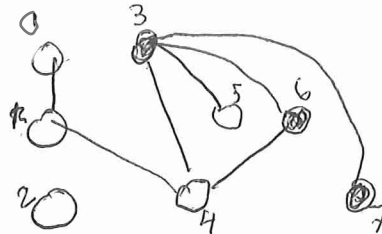
with width t=2

8
 1
 0 3 4
 4 5
 1
 1 2 5 6 7
 2 4
 4
 4



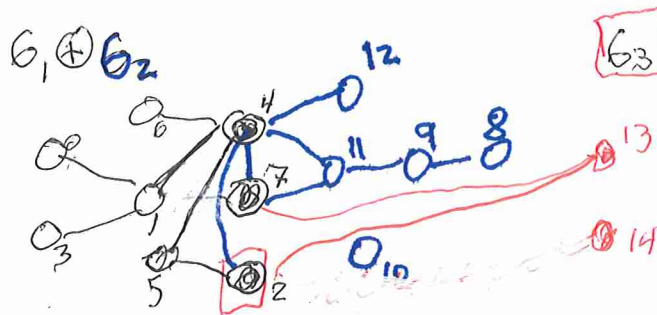
G2 = (10 0 2 20 21 1 10 1 10 21 2 20)
 labels 3 4 5 6 7

8
 1
 0 4
 4 5 6 7
 1 3 6
 3
 3 4
 3



G3 = ((G1) (G2) 0 10 20 1)
 = ((10 0 10 0 20 10 1 21 10 1 10 1 10) (10 0 2 20 21 1 10 1 10 21 2 20) 0 10 20 1)
 labels 3 4 5 6 7 4 11 12 7 2 13 14

|G3|=15
 0: 1
 1: 0 3 4
 2: 4 5 13
 3: 1
 4: 1 2 5 6 7 11 12
 5: 2 4
 6: 4
 7: 4 11 13
 8: 9
 9: 8 11
 10:
 11: 4 7 9
 12: 4
 13: 2 7
 14:



G4 = ((G2 2 21) (G3) (G1))
 labels 8
 = ((10 0 2 20 21 1 10 1 10 21 2 20 2 21) ((10 0 10 0 20 10 1 21 10 1 10 1 10)
 (10 0 2 20 21 1 10 1 10 21 2 20) 0 10 20 1) (10 0 10 0 20 10 1 21 10 1 10 1 10))

26
 1
 0 4
 4 5 6 7 8 15 22 24 25
 1 3 6
 3
 3 4 8
 3
 3 6 12 13 24
 10
 9 11 12
 10
 8 10 13 14 15 19 20
 8 12
 12
 3 12 19
 17
 16 19
 12 15 17
 12
 22
 3 21 23
 22
 3 8
 3

Vertex Cover Example with $t=2$ $S = [\{\}, \{0\}, \{1\}, \{0,1\}, \{2\}, \{0,2\}, \{1,2\}, \{0,1,2\}]$

$G1 = (10 \ 0 \ 10 \ 0 \ 20 \ 10 \ 1 \ 21 \ 10 \ 1 \ 10 \ 1 \ 10)$

$[0, 1, 2, 3]$

op= 10

[None, 1, 1, 2, None, 2, 2, 3]

op= 0

[1, 2, 1, 2, 2, 3, 2, 3]

op= 10

[None, 2, 1, 2, None, 3, 2, 3]

op= 0

[2, 3, 1, 2, 3, 4, 2, 3]

op= 20

[None, 3, None, 2, 3, 4, 2, 3]

op= 10

[None, 3, None, 2, None, 4, 2, 3]

op= 1

[None, 2, None, 3, 2, 3, 3, 4]

op= 21

[None, None, None, 3, 2, 3, 3, 4]

op= 10

[None, None, None, 3, None, 3, 3, 4]

op= 1

[None, 3, None, 4, 3, 3, 4, 4]

op= 10

[None, 3, None, 4, None, 3, 4, 4]

op= 1

[None, 3, None, 4, 4, 3, 5, 4]

op= 10

[None, 3, None, 4, None, 3, 5, 4]

min VC = 3

$G2 = (10 \ 0 \ 2 \ 20 \ 21 \ 1 \ 10 \ 1 \ 10 \ 21 \ 2 \ 20)$

op= 10

[None, 1, 1, 2, None, 2, 2, 3]

op= 0

[1, 2, 1, 2, 2, 3, 2, 3]

op= 2

[1, 2, 1, 2, 2, 3, 2, 3]

op= 20

[None, 2, None, 2, 2, 3, 2, 3]

op= 21

[None, None, None, 2, 2, 3, 2, 3]

op= 1

[None, 2, None, 3, 2, 3, 3, 4]

op= 10

[None, 2, None, 3, None, 3, 3, 4]

op= 1

[None, 2, None, 3, 3, 3, 4, 4]

op= 10

[None, 2, None, 3, None, 3, 4, 4]

op= 21

[None, None, None, 3, None, 3, 4, 4]

op= 2

[None, 3, 4, 3, None, 4, 5, 4]

op= 20

[None, 3, None, 3, None, 4, 5, 4]

min VC = 3

$G1 \text{ opus } G2 = (10 \ 0 \ 10 \ 0 \ 20 \ 10 \ 1 \ 21 \ 10 \ 1 \ 10 \ 1 \ 10) (10 \ 0 \ 2 \ 20 \ 21 \ 1 \ 10 \ 1 \ 10 \ 21 \ 2 \ 20)$

combine [None, 3, None, 4, None, 3, 5, 4] and [None, 3, None, 3, None, 4, 5, 4]

[None, 5, None, 5, None, 5, 8, 5]

min VC = 5

$G3 = ((G1) (G2) 0 \ 10 \ 20 \ 1)$

op= 0

[5, 6, 5, 6, 5, 6, 5, 6]

op= 10

[None, 6, 5, 6, None, 6, 5, 6]

op= 20

[None, 6, None, 6, None, 6, 5, 6]

op= 1

[None, 6, None, 7, 5, 6, 6, 7]

Min VC = 5