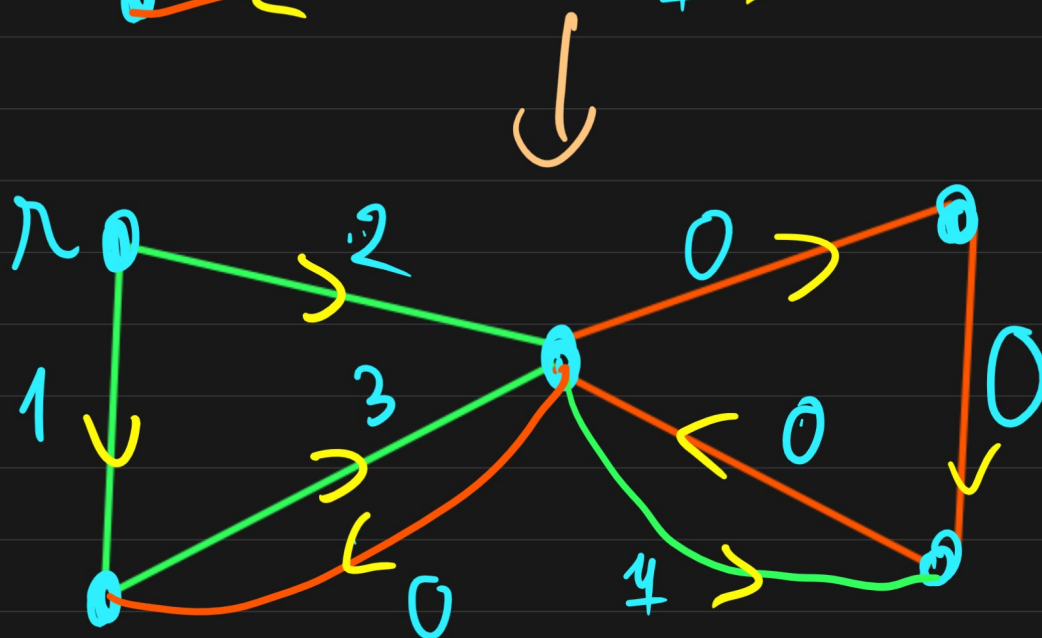
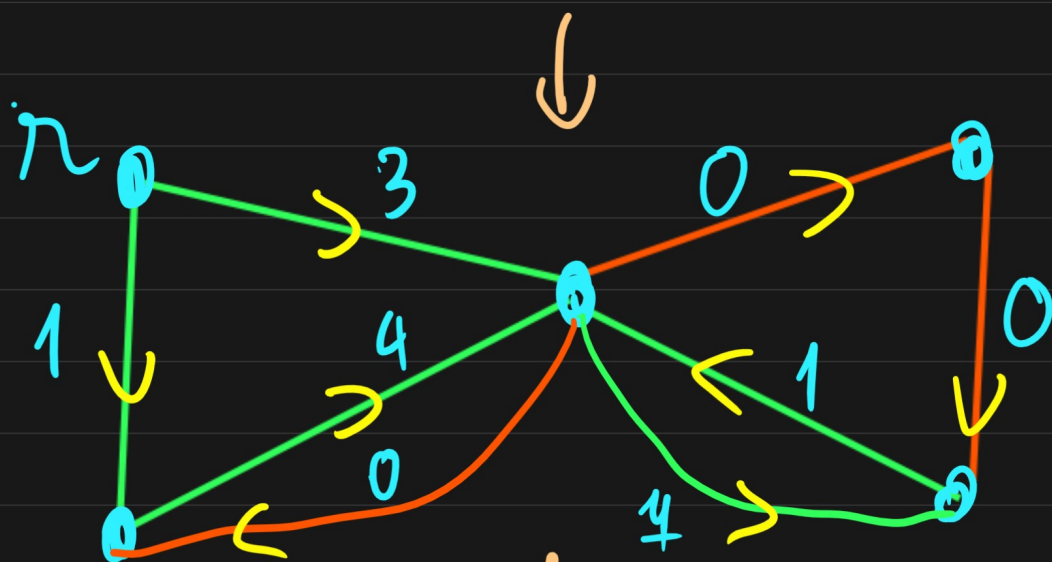
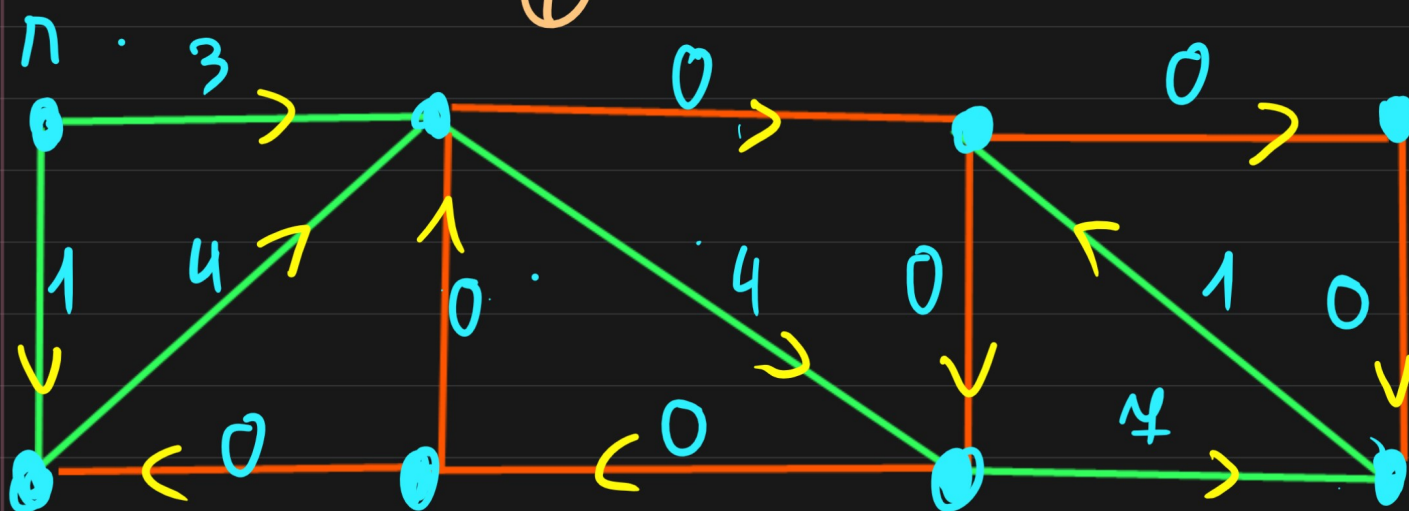
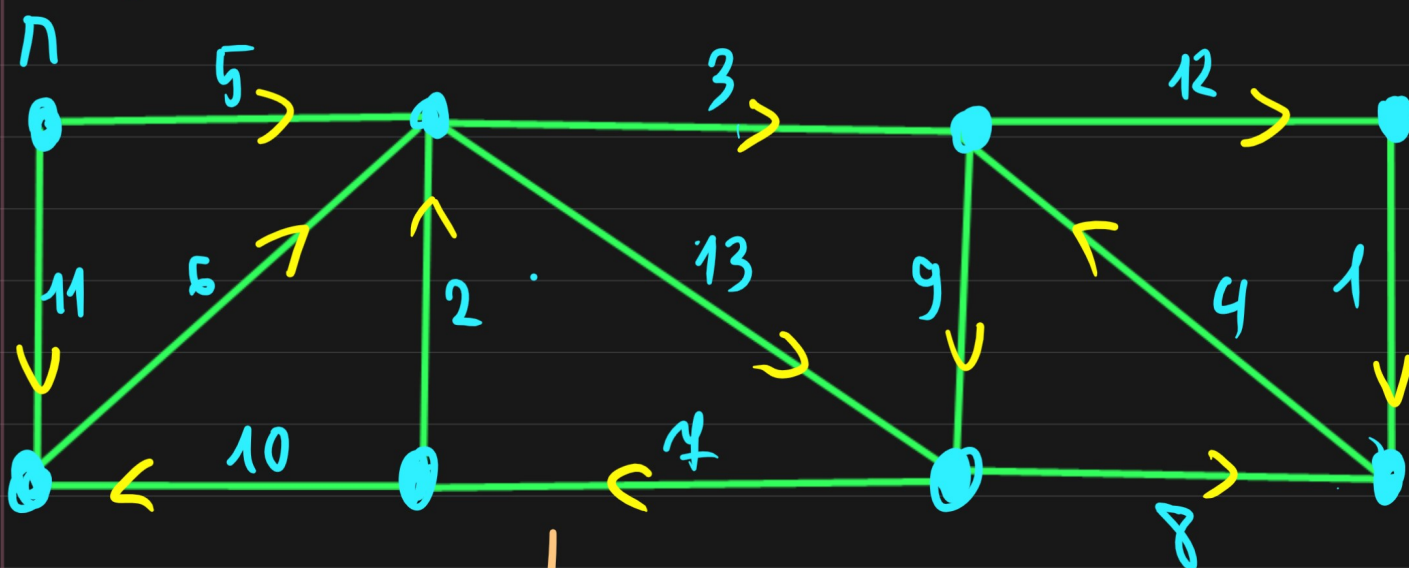
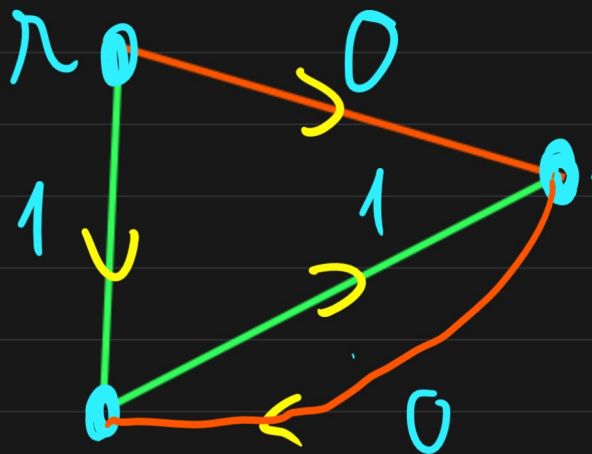
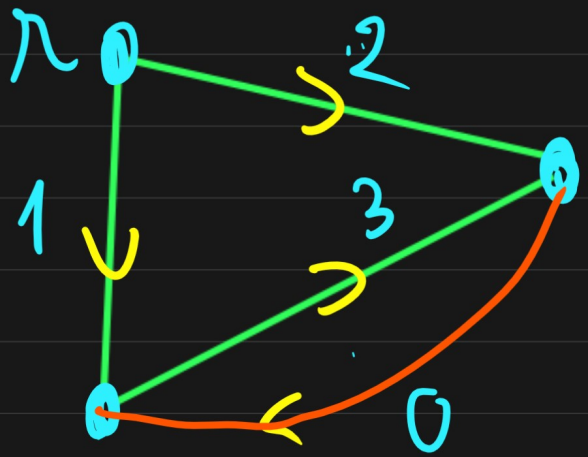
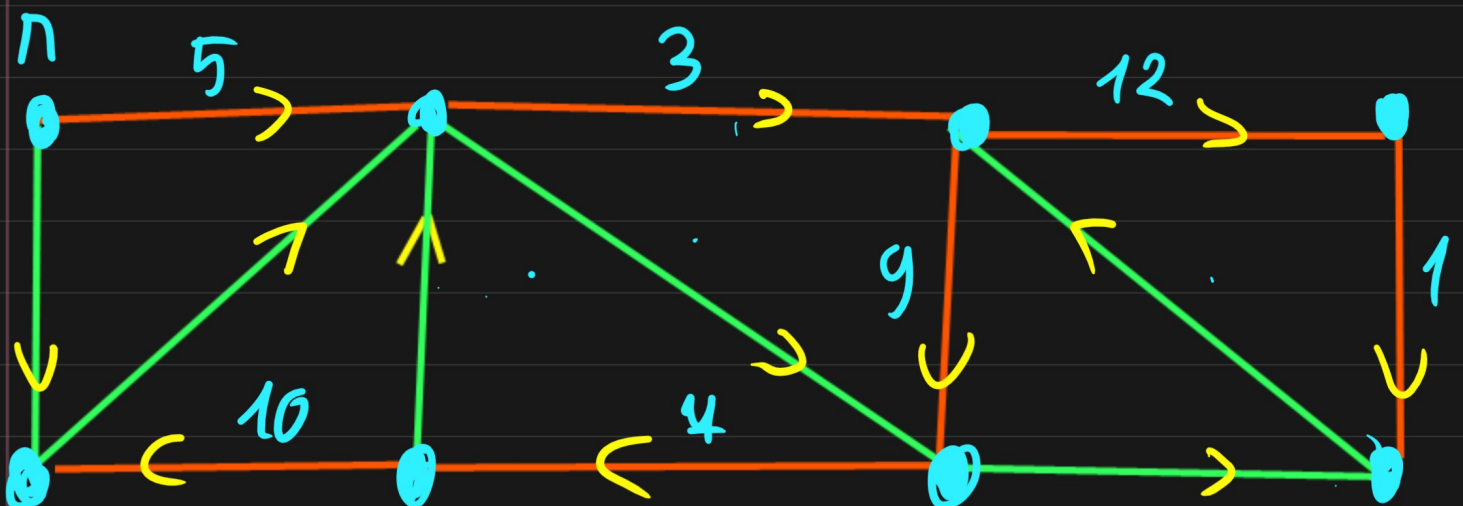
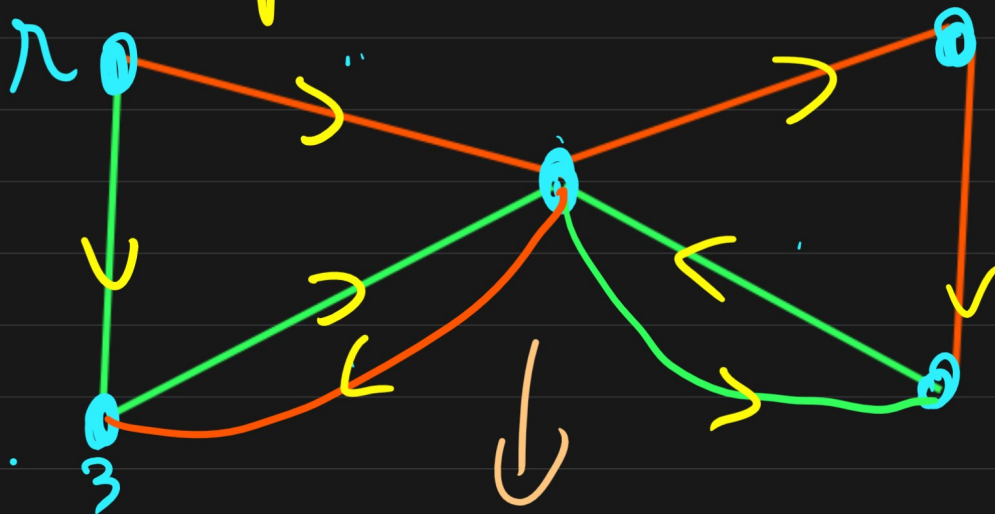


Câu 1: E - B





(*) Bụng đồ thị:



$$\begin{aligned} C &= 5 + 3 + 12 + 1 + 9 + 7 + 10 \\ &= 20 + 10 + 17 \\ &= 47 \end{aligned}$$

Câu 2:

	i	V _i	W _i	$OPT(i, w) = \begin{cases} 0 & \text{if } i = 0 \\ OPT(i-1, w) & \text{if } w_i > w \\ \max \{ OPT(i-1, w), v_i + OPT(i-1, w-w_i) \} & \text{otherwise} \end{cases}$							
	1	43	6								
	2	35	5								
	3	21	2								
	4	17	1								
	5	24	4								
	6	49	3								
•											
		0	1	2	3	4	5	6	7	8	9
0	{}	0	0	0	0	0	0	0	0	0	0
1	{1}	0	0	0	0	0	0	43	43	43	43
2	{1,2}	0	0	0	0	0	35	43	43	43	43
3	{1,2,3}	0	0	21	21	21	35	43	56	64	64
4	{1,2,3,4}	0	17	21	38	38	38	52	60	73	81
5	{1,2,3,4,5}	0	17	21	38	38	41	52	62	73	81
6	{1,2,3,4,5,6}	0	17	21	49	66	70	87	87	90	101

$\Rightarrow \text{Max weight} = 101$

Các môn đồ là : 2, 4, 6

Can 5: $T(n) = 64 T\left(\frac{n}{8}\right) - n^2 \log n$

$$a = 64, \quad b = 8$$

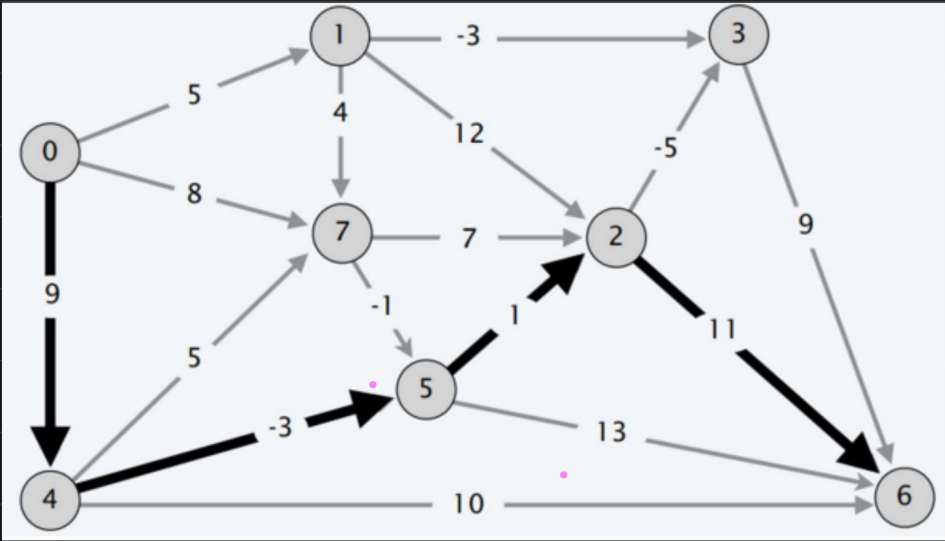
$$h = \log_8 64 = 2$$

$$f(n) = n^2 \log n$$

So sánh $n^2 \leq n^2 \log n$

$$\Rightarrow O(n) = n^2 \log^2 n$$

Câu 3: B-F Dịch



		0	1	2	3	4
(d[0],s[0])	(M,NULL)			19;4	11;1	
(d[1],s[1])	(M,N)			23;2 6;3		
(d[2],s[2])	(M,N)		11;6	4;3		
(d[3],s[3])	(M,N)		9;6			
(d[4],s[4])	(M,N)		10;6		9;5	2;5
(d[5],s[5])	(M,N)		13;6	12;2	5;2	
(d[6],s[6])	(0,N)					
(d[7],s[7])	(M,N)			18;2 12;5	11;2	4;5

$d(0) = 11: 0 \rightarrow 1 \rightarrow 3 \rightarrow 6$

$d(1) = 6: 1 \rightarrow 3 \rightarrow 6$

$d(2) = 4: 2 \rightarrow 3 \rightarrow 6$

$d(3) = 9: 3 \rightarrow 6$

$d(4) = 2: 4 \rightarrow 5 \rightarrow 2 \rightarrow 3 \rightarrow 6$

$d(5) = 5: 5 \rightarrow 2 \rightarrow 3 \rightarrow 6$

$d(6) = 0: 6 \rightarrow 6$

$d(7) = 4: 7 \rightarrow 5 \rightarrow 2 \rightarrow 6$