OS Problem Sheet #6

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Problem 6.1

a)	12	5	19	13	7	8	16
14 KiB	"	"	"	"	"	"	2
9 KiB	3	"	"	"	"	"	2
7 BiK	3	"	"	"	0	"	2
10Kb	3	"	"	3	0	"	2
Final→	3	5	19	3	0	8	2

b)	12	5	19	13	7	8	16
14	"	"	5	"	"	"	"
9	"	"	"	"	"	"	7
7	"	"	"	6	"	"	"
10	2	"	"	"	"	"	"
Final→	2	5	5	6	7	8	7

c)	12	5	19	13	7	8	16
14	"	"	5	"	"	"	"
9	3	"	"	"	"	"	"
7	"	"	"	6	"	"	"
10	"	"	"	"	"	"	6
Final	3	5	5	6	7	8	6

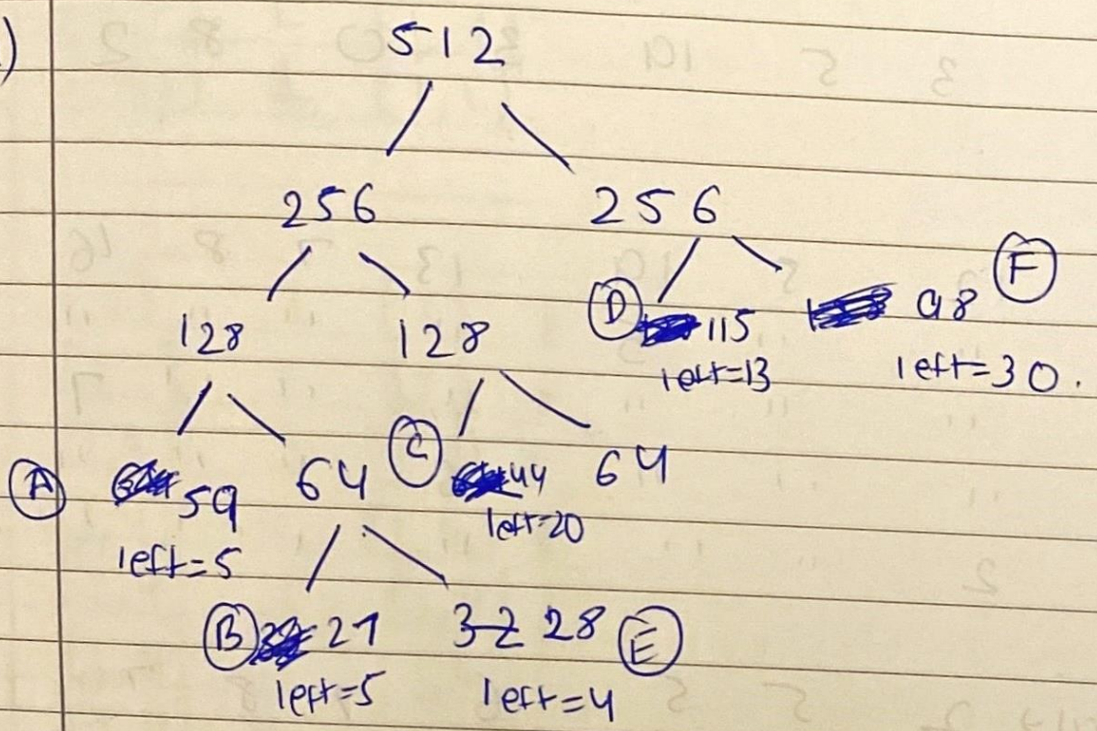
a) 12 5 19 13 7 8 16

14 " " 5 " " " "
9 " " " 4 " " "
7 " " " " 0 " "
10 " " " " " " 6

Find: 12 5 5 4 0 8 6

Problem 6.2

a)



	512							
A→	A	64		128		256		
B→	A	B	32	128		256		
C→	A	B	32	C	64	256		
D→	A	B	32	C	64	D	128	
E→	A	B	E	C	64	D	128	
F→	A	B	E	C	64	D	F.	

b) Internal Frag = 5 + 5 + 4 + 20 + 13 + 30
= 77

c) When process D finishes there will only be 128 KB of space left which it had used. 132 KB can not fit in that space, so it will not be accomodated. And you cannot merge blocks so therefore not possible.

Problem 6.3

a)

	1	2	3	4	1	1	4	2	1	2
Frame 0	1	1	3	3	1	1	1	1	1	1
Frame 1		2	2	4	4	4	4	2	2	2
	*	*	*	*	*			*		

Page Fault = 6

	1	2	3	4	1	1	4	2	1	2
Frame 0	1	1	1	4	4	4	4	4	4	4
Flame 1		2	2	2	1	1	1	1	1	1
Frame 2			3	3	3	3	3	2	2	2
	*	*	*	*	*			*		

Page Fault = 6.

b)

	1	2	3	4	1	1	4	2	1	2
Frame 0	1	1	1	1	1	1	1	1	1	1
Frame 1		2	3	4	4	4	4	2	2	2
	*	*	*	*				*		

Page Fault = 5

	1	2	3	4	1	1	4	2	1	2
Frame 0	1	1	1	1	1	1	1	1	1	1
Frame 1		2	2	2	2	2	2	2	2	2
Frame 2			3	4	4	4	4	4	4	4
	*	*	*	*						

Page Fault = 4.

c)

	1	2	3	4	1	1	4	2	1	2
Frame 0	1	1	3	3	1	1	1	2	*2	*2
Frame 1		2	2	4	4	4	4	4	1	1
	*	*	*	*	*			*	*	

Page Fault = 7

	1	2	3	4	1	1	4	2	1	2
Frame 0	1	1	1	4	4	4	4	4	4	4
Frame 1		2	2	2	1	1	1	1	1	1
Frame 2		3	3	3	3	3	3	2	2	2
	*	*	*	*	*			*		

Page Fault = 6.