A company has **six** departments having the following number of hosts. The network administrator has been given the **192.168.10.0/24** address and asked to divide them among the departments. How can this be done? **13**

Put your answer in the empty cells of the following table. You must show necessary calculation in the space below the table.

Dept Name	**# of PCs**	**Net + Host bit**	**Network Address**	**Netmask**	**First Host Address**	**Last Host Address**	**Broadcast Address**
A	60	26+ 6	192.168.10.0 - 63	/26	10.1	10.62	10.63
B	50	26+6	192.168.10.64 – 127	/26	10.65	10.126	10.127
C	25	27+5	128 – 159	/27	10.129	10.158	10.159
D	20	27+5	160 – 191	/27			
E	12	28+4	192 – 207	/28			
F	8	28+4	208 - 223	/28			223

How many unused IP addresses are left (in total) after this assignment?

192.168.10.0/23 = Host 9-bit = 512

Dept Name	# of PCs	Net + Host bit	Network Address	Netmask	First Host Address	Last Host Address	Broadcast Address
A	100	25+ 7	192.168.10.0 - 10.127	/25			
B	70	25 + 7	10.128 - 10.255	/25			
C	50	26+ 6	11.0 - 11.63	/26			
D	40	26 + 6	11.64 - 11.127	/26			
E	30	27+ 5	11.128 – 159	/27			
F	20	27 + 5	11.160 – 11.191	/27			
G	10	28 + 4	11.192 – 11.207	/28			
H	6	29 + 3	11.208 – 11.215	/29			
R1-R2	2	30 + 2	11.216 – 11.219	/30			
R1-R2	2	30 +2	11.220 – 11.223	/30			