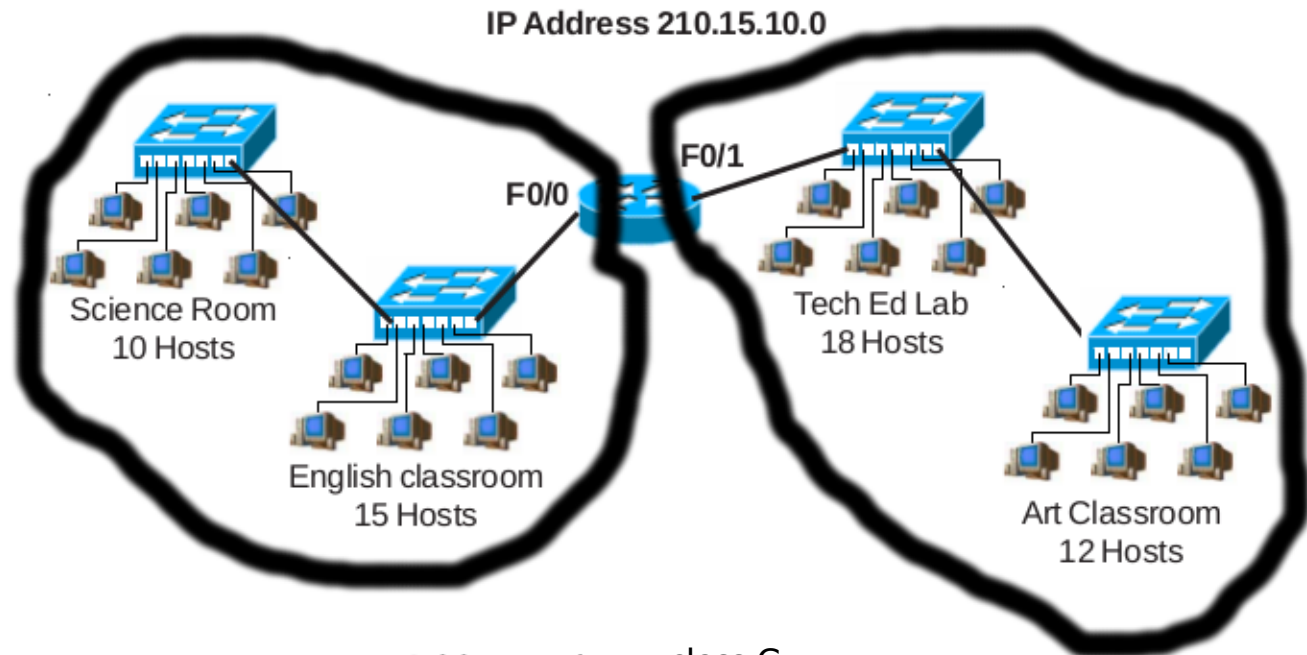


## Practical Subnetting 5

Based on the information in the graphic shown, design a network addressing scheme that will supply the **minimum number of hosts per subnet**, and allow enough extra subnets and hosts for 100% growth in all areas. Circle each subnet on the graphic and answer the questions below.



Address class	class C
Custom subnet mask	255.255.255.192
Minimum number of subnets needed	2
Extra subnets required for 100% growth (Round up to the next whole number)	+2
Total number of subnets needed	=4
Number of host addresses in the largest subnet group	30
Number of addresses needed for 100% growth in the largest subnet (Round up to the next whole number)	+ 30
Total number of address needed for the largest subnet	= 60

Start with the first subnet and arrange your sub-networks from the largest group to the smallest.

IP address range for Router F0/0 Port 210.15.10.0 to 210.15.10.63

IP address range for Router F0/1 Port 210.15.10.64 to 210.15.10.127

Show your work for Problem 5 in the space below.

+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
# of hosts	256   128	64   32   16	8   4	2				
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
# of subnets	2   4	8   16   32	64   128	256				
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
binary values	128   64	32   16   8	4   2	1				
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+

**210.15.10.0 0 0 0 0 0 0 0**

subnet 1:	0	0	210.15.10.0 to 210.15.10.63
subnet 2:	0	1	210.15.10.64 to 210.15.10.127
subnet 3:	1	0	210.15.10.128 to 210.15.10.191
subnet 4:	1	1	210.15.10.192 to 210.15.10.255