# IP Addressing Homework V1

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Work the problems out by hand no calculators allowed, and submit your answers to canvas.

1. (1 pt) Your ISP sent you the following information. Default Gateway 130.75.69.32/22

What is the proper subnet mask for this IP address (in dotted decimal format)?

11111111.11111111.11111100.00000000.00000000 (255.255.252.0)

1. (1 pt) Given the subnet mask 255.255.255.192. How many host addresses are on this network?  
   62 hosts
2. (1 pt) What is the broadcast address for the network the 10.10.5.5 subnet 255.255.0.0 host is on?  
   10.10.255.255
3. (1 pt) What is the class full subnet mask for the ip address 128.187.60.50?  
     
   Class B – 255.255.0.0
4. (2 pts) Using the rules we learned in class determine if these IP address configurations are valid for an **Internet** host?

|  |  |  |  |
| --- | --- | --- | --- |
| **IP** | **Subnet** | **Valid** | **If not why?** |
| 218.50.10.5 | 255.255.255.240 | Yes |  |
| 192.169.1.5 | 255.255.255.0 | Yes |  |
| 200.12.18.34 | 255.255.0.0 | No | Subnet has too many host bits for its class (class C – 255.255.255.0) (Won’t route through classful routers) |
| 128.187.61.28 | 255.255.255.192 | Yes |  |

1. (4 pts) Given the following information, are the source and destination hosts on the same network?

|  |  |  |  |
| --- | --- | --- | --- |
| **Source** | **Destination** | **Subnet Mask** | **Same Network?** |
| 18.26.113.18 | 18.26.112.19 | 255.255.255.0 | No |
| 206.150.184.62 | 206.150.184.65 | 255.255.255.192 | No |
| 110.18.97.1 | 110.18.125.2 | 255.255.224.0 | Yes |
| 14.100.255.1 | 14.100.100.1 | 255.255.0.0 | Yes |