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## **IP SUBNET QUESTIONS (Worksheet #1)**

Given the following IP addresses/net/subnet masks, identify how many bits are borrowed for the host/subnet, how many hosts/subnets are usable, and the network and broadcast addresses.

**156.192.162.56/255.255.255.0**

Address Class : **B**

Bits Borrowed for Subnet: **8**

Bits for Host: **8**

Number of Usable Subnets: **254**

Number of Usable Hosts/Subnet: **254**

Network Address: **156.192.162.0**

Usable Address Range: **156.192.162.1-  
156.192.162.254**

Broadcast Address: **156.192.162.255**

**205.173.45.9/255.255.255.0**

Address Class : **C**

Bits Borrowed for Subnet: **0**

Bits for Host: **8**

Number of Usable Subnets: **1**

Number of Usable Hosts/Subnet: **254**

Network Address: **205.173.45.0**

Usable Address Range: **205.173.45.1-  
205.173.45.254**

Broadcast Address: **205.173.45.255**

**204.167.98.45/255.255.255.240**

Address Class : **C**

Bits Borrowed for Subnet: **4**

Bits for Host: **4**

Number of Usable Subnets: **14**

Number of Usable Hosts/Subnet: **14**

Network Address: **204.167.98.32**

Usable Address Range: **204.167.98.33-  
204.167.98.46**

Broadcast Address: **204.167.98.47**

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**201.1.97.33/255.255.255.248**

Address Class : **C**

Bits Borrowed for Subnet: **5**

Bits for Host: **3**

Number of Usable Subnets: **30**

Number of Usable Hosts/Subnet: **6**

Network Address: **201.1.97.32**

Usable Address Range: **201.1.97.33-  
201.1.97.38**

Broadcast Address: **201.1.97.39**

**13.156.59.109/255.255.255.248**

Address Class : **A**

Bits Borrowed for Subnet: **21**

Bits for Host: **3**

Number of Usable Subnets: **2,097,150**

Number of Usable Hosts/Subnet: **6**

Network Address: **13.156.59.104**

Usable Address Range: **13.156.59.105-  
13.156.59.110**

Broadcast Address: **13.156.59.111**

**199.15.201.77/255.255.255.224**

Address Class : **C**

Bits Borrowed for Subnet: **3**

Bits for Host: **5**

Number of Usable Subnets: **6**

Number of Usable Hosts/Subnet: **30**

Network Address: **199.15.201.64**

Usable Address Range: **199.15.201.65-  
199.15.201.94**

Broadcast Address: **199.15.201.95**

**208.141.56.142/255.255.255.192**

Address Class : **C**

Bits Borrowed for Subnet: **2**

Bits for Host: **6**

Number of Usable Subnets: **2**

Number of Usable Hosts/Subnet: **62**

Network Address: **208.141.56.128**

Usable Address Range: **208.141.56.129-  
208.141.56.190**

Broadcast Address: **208.141.56.191**

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**165.191.4.67/255.255.255.192**

Address Class : **B**

Bits Borrowed for Subnet: **10**

Bits for Host: **6**

Number of Usable Subnets: **1,022**

Number of Usable Hosts/Subnet: **62**

Network Address: **165.191.4.64**

Usable Address Range: **165.191.4.65-  
165.191.4.126**

Broadcast Address: **165.191.4.127**

**161.212.7.129/255.255.255.252**

Address Class : **B**

Bits Borrowed for Subnet: **14**

Bits for Host: **2**

Number of Usable Subnets: **16,382**

Number of Usable Hosts/Subnet: **2**

Network Address: **161.212.7.128**

Usable Address Range: **161.212.7.129-  
161.212.7.130**

Broadcast Address: **161.212.7.131**

**164.7.115.7/255.255.252.0**

Address Class : **B**

Bits Borrowed for Subnet: **6**

Bits for Host: **10**

Number of Usable Subnets: **62**

Number of Usable Hosts/Subnet: **1,022**

Network Address: **164.7.112.0**

Usable Address Range: **164.7.112.1-  
164.7.115.254**

Broadcast Address: **164.7.115.255**

**156.27.129.174/255.255.240.0**

Address Class : **B**

Bits Borrowed for Subnet: **4**

Bits for Host: **12**

Number of Usable Subnets: **14**

Number of Usable Hosts/Subnet: **4,094**

Network Address: **156.27.128.0**

Usable Address Range: **156.27.128.1-  
156.27.143.254**

Broadcast Address: **156.27.143.255**