# IPv4 Assignment 5

### Given – 195.180.170.0 /24. You require 58 networks to control broadcasts.

1. How many bits do you borrow to create these networks? (2 marks)  
   6
2. What is the new mask? (3 marks)  
   255.255.255.252
3. How many host bits are there? (1 mark)  
     
     
   2
4. How many host addresses are created in each network? (2 marks)  
   4, 2 usable

List the first 10 networks created with the mask in dotted decimal. (3 marks)  
  
192.180.170.0   
192.180.170.4

192.180.170.8

192.180.170.12

192.180.170.16

192.180.170.20

192.180.170.24

192.180.170.28

192.180.170.32

192.180.170.36

1. What is the network address of the 8th network? (2 marks)  
     
   192.180.170.28
2. What is the range of host addresses for this network? (3 marks)  
   192.180.170.29-30
3. What is the broadcast address for this network? (2 marks)  
     
   192.180.170.31

Total for this page \_\_\_\_\_\_\_\_  
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### Given – 15.0.0.0 /8. You require 275 networks to control broadcasts.

1. How many bits do you borrow to create these networks? (2 marks)  
     
   9
2. What is the new mask? (3 marks)  
     
   /17
3. How many host bits are there? (1 mark)  
     
   15
4. How many host addresses are created in each network? (2 marks)  
     
   32768
5. List the first 10 networks created with the mask in dotted decimal. (3 marks)  
     
   15.0.0.0

15.0.128.0

15.1.0.0

15.1.128.0

15.2.0.0

15.3.128.0

15.4.0.0

15.4.128.0

15.5.0.0

15.5.128.0

1. What is the network address of the 130th network? (2 marks)  
   15.65.0.0
2. What is the range of host addresses for this network? (3 marks)  
   15.65.0.0-15.65.127.254
3. What is the broadcast address for this network? (2 marks)  
     
   15.65.127.255

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