# 1. Calcula l’adreça de xarxa i de broadcast, donades aquestes IP:

a) 172.16.4.12/8

MX = 255.0.0.0

IPBin = **10101100**.00010000.00000100.00001100

MXBin = 11111111.00000000.00000000.00000000

AXBin = **10101100**.00000000.00000000.00000000

ABBin = **10101100**.11111111.11111111.11111111

AX = 172.0.0.0

AB = 172.255.255.255

b) 172.16.4.12/16

MX = 255.255.0.0

IPBin = **10101100.00010000**.00000100.00001100

MXBin = 11111111.11111111.00000000.00000000

AXBin = **10101100.00010000**.00000000.00000000

ABBin = **10101100.00010000**.11111111.11111111

AX = 172.16.0.0

AB = 172.16.255.255

c) 172.16.4.12/24

MX = 255.255.255.0

IPBin = **10101100**.**00010000**.**00000100**.00001100

MXBin = 11111111.11111111.11111111.00000000

AXBin = **10101100**.**00010000**.**00000100**.00000000

ABBin = **10101100**.**00010000**.**00000100**.11111111

AX = 172.16.4.0

AB = 172.16.4.255

d) 172.16.4.12/11

MX = 255.224.0.0

IPBin = **10101100**.**000**10000.00000100.00001100

MXBin = 11111111.11100000.00000000.00000000

AXBin = **10101100**.**000**00000.00000000.00000000

ABBin = **10101100**.**000**11111.11111111.11111111

AX = 172.0.0.0

AB = 172.31.255.255

e) 172.16.4.12/12

MX = 255.240.0.0

IPBin = **10101100.0001**0000.00000100.00001100

MXBin = 11111111.11110000.00000000.00000000

AXBin = **10101100.0001**0000.00000000.00000000

ABBin = **10101100.0001**1111.11111111.11111111

AX = 172.16.0.0

AB = 172.31.255.255

# 2. Calcula el host mínim, màxim, i número de dispositius disponibles donades aquestes IP:

a) 172.16.4.12/8

HostMin = **172**.0.0.1

HostMax = **172**.255.255.254

Nº dispositivos = 2²⁴ - 2

b) 72.16.4.12/16

HostMin = **172.16**.0.1

HostMax = **172.16**.255.254

Nº dispositivos = 2¹⁶ - 2

c) 172.16.4.12/11

HostMin = **172**.0.0.1

HostMax = **172**.255.255.254

Nº dispositivos = 2²¹ - 2

d) 172.16.4.12/12

HostMin = **172**.16.0.1

HostMax = **172**.31.255.254

Nº dispositivos = 2²⁰ - 2