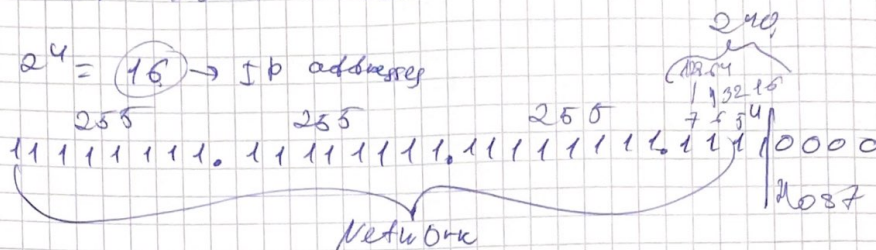


Q8. 35.72.90.0 /28.
32 bit - 28 bit = 4 bit

$2^4 = 16 \rightarrow$ IP addresses



Q9

a) 2 subnet with 18 available IP

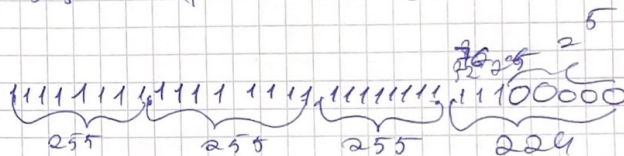
$18 + 2 = 20$ closest 2's factor is $2^5 = 32$

$2^5 = 32$

$32 - 5 = 27$

Network addresses

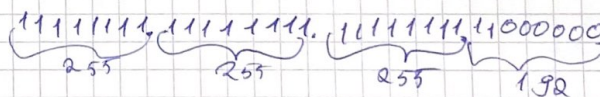
and broadcast varies by 32. 220.100.202.0



b) 2 subnet, 31 available IP

$31 + 2 = 33$ closest 2's factor is $2^6 = 64$

$32 - 6 = 26$



Q10. varies by 64.

174.45.62.255

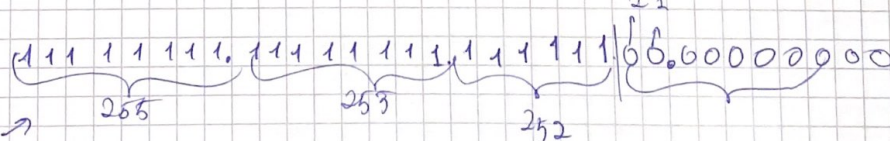
mask /22

$32 - 22 = 10$

We change only last 2 decimals

$2^{10} = 1024$

$255 - 3 = 252$



subnet.

Q11

Network 102.44.72

$5 + 4 = 9$ closest

$32 - 8 = 24$

Network varies

11111111.1111

255 25

$32 - 4 = 28$

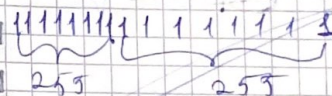
$2^8 = 256$

$2^7 = 128$

2) 102.44.72.0

$32 - 18 = 14$

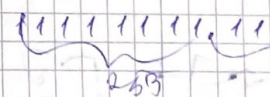
$2^{14} = 16384$



$18 + 1 = 19$ cl

$32 - 5 = 27$

Network varies



3) 102.44.72.0

$14 + 5 = 19$

$32 - 4 = 28$

Network varies

11111111.11

1. $98 + 1 = 99$ closest $2^6 = 64$

Network varies by 64

11111111 11111111 11111111 11000000
 $255 \quad 255 \quad 255 \quad 192$

2. Neurology 4

$4 + 125$ closest $2^3 = 8$

Network varies by 8

11111 111... 111... 11111000
 $25 \quad 255 \quad 255 \quad 248$

Immunology

$187 + 1$ closest $2^5 = 32$

Network varies by 32

111... 111... 111... 11100000
 $255 \quad 255 \quad 255 \quad 224$

3. Ophthalmology 14

$24 + 15 = 39$ closest $2^4 = 16$

111... 111... 111... 11110000

4. Endocrinology

$67 + 1 = 68$ closest $2^3 = 8$

Varies by 8

11111 111... 111... 11111000
 $255 \quad 255 \quad 255 \quad 248$

5. $48 + 1 = 49$ closest $2^6 = 64$

Network varies by 64

11111111 11111111 11111111 11000000
 $255 \quad 255 \quad 255 \quad 192$