

# lab4

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- [github lab link](#)

## task1

- $21 = 16 + 4 + 1 = 00010101$
- $111 = 64 + 32 + 8 + 4 + 2 + 1 = 01101111$
- $115 = 64 + 32 + 16 + 2 + 1 = 01110011$
- $186 = 128 + 32 + 16 + 8 + 2 = 10111010$

## task2

ip	binary	type
255.255.1.0	11111111.11111111.00000001.00000000	INVALID IP or MASK
128.61.0.1	10000000.00111101.00000000.00000001	VALID IP
192.201.255.254	11000000.11001001.11111111.11111110	VALID IP
214.47.8.160	11010110.00101111.00001000.10100000	VALID IP
223.256.72.120	11011111.100000000.01001000.01111000	INVALID IP or MASK

255.255.64.0	11111111.11111111.01000000.00000000	INVA IP or MAS
218.212.34.255	11011010.11010100.00100010.11111111	VALI IP
255.253.254.0	11111111.11111101.11111110.00000000	INVA IP or MAS
111.111.111.111	01101111.01101111.01101111.01101111	VALI IP
203.181.133.6	11001011.10110101.10000101.00000110	VALI IP
255.255.255.224	11111111.11111111.11111111.11100000	VALI MAS

## task3

name	value	binary
ip	155.79.209.96	10011011.01001111.11010001.01100000
mask	255.255.255.224	11111111.11111111.11111111.11100000
net part	155.79.209	10011011.01001111.11010001
host part	.96	.01100000
count of nets	254	$2^8 - 2$

# task4

name	value
ip/mask	176.141.64.58/26
ip	176.141.64.0
mask	255.255.255.192
net size	62
min addr	176.141.64.1
max addr	176.141.64.62
broadcast	176.141.64.63

name	value
ip/mask	145.129.153.215/21
ip	145.129.152.0
mask	255.255.248.0
net size	2046
min addr	145.129.152.1
max addr	145.129.159.254
broadcast	145.129.159.255