1.

300 - /23

200 - /24

100 - /25

80 - /25

60 - /26

35 - /27

C KLASA IP Adresa

Lokacija C

Network address: 192.168.0.0

First usable IP: 192.168.0.1

Last usable IP: 192.168.1.254

Subnet mask = 255.255.254.0

Broadcast IP: 192.168.1.255

Lokacija A

Network address: 192.168.2.0

First usable IP: 192.168.2.1

Last usable IP: 192.168.2.254

Subnet mask = 255.255.255.0

Broadcast IP = 192.168.2.255

Lokacija B

Network address: 192.168.3.0

First usable IP = 192.168.3.1

Last usable IP = 192.168.3.126

Subnet mask = 255.255.255.128

Broadcast IP = 192.168.3.127

Lokacija D

Network address: 192.168.3.128

First usable IP: 192.168.3.129

Last usable IP: 192.168.3.254

Broadcast IP: 192.168.3.255

Subnet mask: 255.255.255.128

Lokacija F

Network address: 192.168.4.0

First usable IP: 192.168.4.1

Last usable IP: 192.168.4.62

Broadcast IP: 192.168.4.63

Subnet mask: 255.255.255.192

Lokacija E

Network address: 192.168.4.64

First usable IP: 192.168.4.65

Last usable IP: 192.168.4.126

Broadcast IP: 192.168.4.127

Subnet mask: 255.255.255.192

2.

/16 – 11111111.11111111.00000000.00000000 – 255.255.0.0

/12 – 11111111.11110000.00000000.00000000 – 255.240.0.0

/8 – 11111111.00000000.00000000.00000000 – 255.0.0.0

/20 – 11111111.11111111.11110000.00000000 – 255.255.240.0

/25 – 11111111.11111111.11111111.10000000 – 255.255.255.128

/27 – 11111111.11111111.11111111.11100000 – 255.255.255.224

3.

0+8+8+8+8+8+8+8=8+16+16+16=24+16+16=40+16=56

10.10.100.56/29

4.

192.168.1.0/24

192.168.2.0/26

192.168.4.0/29

192.168.6.128/25

192.168.13.0/25

192.168.15.128/26

0000|0001

0000|0010

0000|0100

0000|0110

0000|1101

0000|1111

0000 = 4

192.168.0.0/20

5.

A – 10.0.0.0/8

B – 172.16.0.0/12

C – 192.168.0.0/16

1. 255.255.192.0

U = 32

m = 18

KLASA A

n = 8

 No. subnets = 2^(m-n) = 2^(18-8) = 2^10 = 1024

 Usable IP addresses = 2^(32-18) – 2 = 2^14 – 2 = 16382

KLASA B

 n = 12

 No. subnets = 2^(m-n) = 2^(18-12) = 2^6 = 64

 Usable IP addresses = 2^(32-18) – 2 = 2^14 – 2 = 16384-2 = 16382

 KLASA C

 n = 16

 No. subnets = 2^(m-n) = 2^(18-16) = 2^2 = 4

 Usable IP addresses = 2^(32-18) – 2 = 2^14 – 2 = 16384-2 = 16382

1. 255.248.0.0

U = 32

m = 13

KLASA A

 n = 8

 No. subnets = 2^(13-8) = 2^5 =32

 Usable IP addresses = 2^(32-13) – 2 = 2^19 – 2 = 524286

KLASA B

 n = 12

 No. subnets = 2^(13-12) = 2^1 = 2

 Usable IP addresses = 2^(32-13) – 2 = 2^19 – 2 = 524286

KLASA C

 n = 16

 No. subnets = 2^(13-16) = 2^-3 = PREVELIKO ZA KLASU C

1. 255.255.248.0

U = 32

m = 21

KLASA A

 n = 8

 No. subnets = 2^(m-n) = 2^(21-8) = 2^13 = 8192

 Usable IP addresses = 2^(32-21) – 2 = 2^11 -2 = 2048 – 2 = 2046

KLASA B

 n = 12

 No. subnets = 2^(m-n) = 2^(21-12) = 2^9 = 512

 Usable IP addresses = 2^(32-21) – 2 = 2^11 – 2 = 2048 – 2 = 2046

KLASA C

 n = 16

 No. subnets = 2^(m-n) = 2^(21-16) = 2^5 = 32

 Usable IP addresses = 2^(32-21) – 2 = 2^11 -2 =2048 – 2 = 2046

1. 255.255.255.248

U = 32

m = 29

KLASA A

 n = 8

 No. subnets = 2^(m-n) = 2^(29-8) = 2^21 = 2097152

 Usable IP addresses = 2^(32-29) – 2 = 2^3 – 2 = 8 – 2 = 6

KLASA B

 n = 12

 No. subnets = 2^(m-n) = 2^(29-12) = 2^17 = 131072

 Usable IP addresses = 2^(32-29) – 2 = 2^3 – 2 = 8 – 2 = 6

KLASA C

 n = 16

 No. subnets = 2^(m-n) = 2^(29-16) = 2^13 = 8192

 Usable IP addresses = 2^(32-29) – 2 = 2^3 – 2 = 8 – 2 = 6

6.

a) 10.1.0.0/23

Network address = 10.1.0.0

First usable IP address = 10.1.0.1

Last usable IP address = 10.1.1.254

Broadcast IP address = 10.1.1.255

B) 10.2.4.0/24

Network address = 10.2.4.0

First usable IP address = 10.2.4.1

Last usable IP address = 10.2.4.254

Broadcast IP address = 10.2.4.255

c) 10.3.6.0/25

Network address = 10.3.6.0

First usable IP address = 10.3.6.1

Last usable IP address = 10.3.6.126

Broadcast IP address = 10.3.6.127

d) 10.4.8.0/26

Network address = 10.4.8.0

First usable IP address = 10.4.8.1

Last usable IP address = 10.4.8.62

Broadcast IP address = 10.4.8.63

e) 10.5.10.0/27

Network address = 10.5.10.0

First usable IP address = 10.5.10.1

Last usable IP address = 10.5.10.30

Broadcast IP address = 10.5.10.31

f) 10.6.12.0/28

Network address = 10.6.12.0

First usable IP address = 10.6.12.1

Last usable IP address = 10.6.12.14

Broadcast IP address = 10.6.12.15