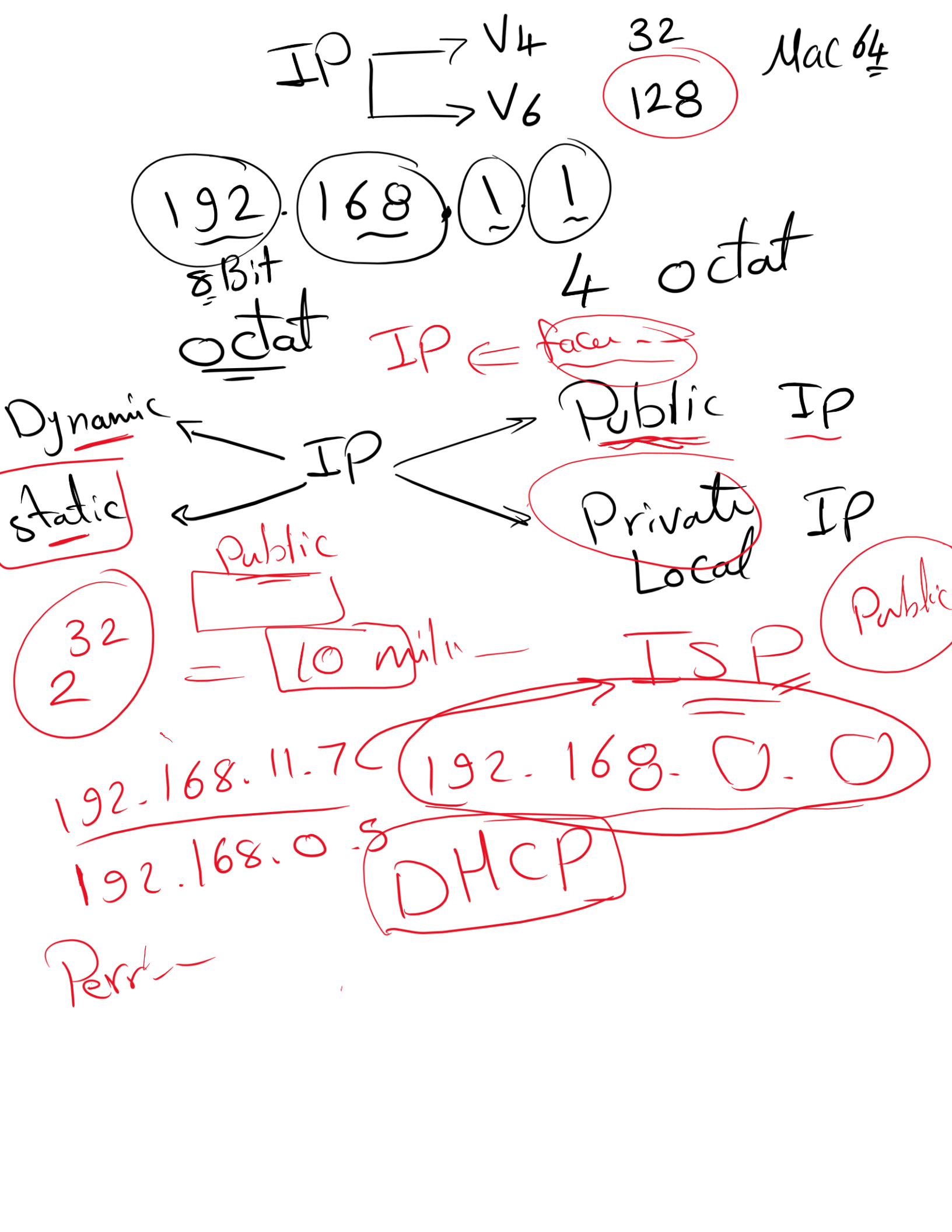
IP
V4
V6
32
128
Mac 64
192.168.1.1
8 Bit
octat
4 octat
IP
Dynamic
static
Public IP
Private IP
Local
Public
32
2
10 mill
ISP
Public
192.168.11.7
192.168.0.8
192.168.0.0
DHCP
Perr

Classes IP □.□.□.□

A	0 - 127	0 *** ****	2^8 Net	2^{24} Host	$2^{24}-2$
B	128.191	10** ****	2^{16} Net	2^{16} Host	$2^{16}-2$
C	192.223	110 *****	2^{24} Net	2^8 Host	2^8-2
D	224 - 239	1110 ****	Multicast		
E	239 - 255	1111 ****	Experim		

128 - 64 + 32 + 16 + 8 + 4 + 2 + 1

00001011

192.168.11.5

***** 110.00000.10101000

A □.□.□.□

N عدد ال

Hosts عدد ال

$2^8 = 256$

2^{24}

0

□.□.□.□

Net

$2^{16} = 65536$

$2^{16} = 65536$

□.□.□.□

Net

2^{24}

2^{8} Host

⇒ 192.168.11.11 C

Net

192.168.11.0

255

⇒ 192.168.11.0 Net_Addr

255

⇒ 192.168.11.255 Broadcast

11111111

⇒ 192.168.11.11 (C)

Net

255.255.255.0 ⇒ Subnet Mask

11111111.[-]

Net_Add = 192.168.11.0

Net_Add ~ Net_ID

IP
Subnet Mask

A ⇒ 255.0.0.0

B ⇒ 255.255.0.0

C ⇒ 255.255.255.0

---

30 PC

32 ⇒ Net + Broadcast

2^{24}

$2^8 = 256$

2^{16} 6ss~

Classless IP

$30 + 2 = 32 \longrightarrow$ 5 Bit

$32 - 5 = 27 \Rightarrow$ Net

Classless 27 Net 5 Host

$\Rightarrow$ 192.168.11.11 $\Rightarrow$ 0000 1011 (Host)

Net_ID . 192.168.11.0 | 000 | 0 1011

255.255.255.224 | 111 | 0 0000

000 00000

128.86.u. 32 $\Rightarrow$ classless 192.168.11.0/27

Classless

$2^5 - 2 = 30$

11111111 . 11111111 . 11111111 . 111 00000

255 . 255 . 255 . 224

128.64.32.16.8.4.2.1

197.13.45.128/27

255.255.255.224

1000 0000

100 1111

100 1000

197.13.45.1000 0000

H

$2^5 = 32$

AD ⇒ 12

AT ⇒ 4

AA ⇒ 3

AD 12 + 2 = 14

197.13.45.1000 0000

128 ⇒ Net ID

197.13.45.1000 1111

197.13.45.128/28 Net ID 153 ⇒ Broad AD

AD →

197.13.45.128/28 Net ID 153 ⇒ Broad AD

197.13.45.153/28 Broadcast AD

Subnet Mask 255.255.255.240

AT ⇒ 4 + 2 = 6

3 Bit /29

100 10000

197.13.45.154/29 ⇒ Net ID

197.13.45.161/29 ⇒ Broad-

111

255.255.255.248

11111000

255.255.255.248

AA $\Rightarrow$ 3 + 2 = 5 $\Rightarrow$ (3) Bit

$2^3 = 8$

197.13.us.162/29 $\Rightarrow$ Net A

197.13.us.169 $\Rightarrow$ P

255.255.255.248