Working With Class B Address 128.10.0.0

Max # Of Subnets	Min # Of Bits	Subnet #	Host #	Max # Of Hosts	128.10.x.y
200	8	193	129	254	128.10.193.129

200 Subnets

Network ID		Subnet	Host
NNNN NNNN	NNNN NNNN	SSSS SSSS	HHHH HHHH
1000 0000	0000 1010	11000001	10000001
128	10	193	129

128	64	32	16	8	4	2	1
1	1	0	0	0	0	0	1
1	0	0	0	0	0	0	1

Subnet Mask

Network ID		Subnet	Host
1111 1111	1111 1111	1111 1111	0000 0000
255	255	255	0

# Of Bits	Max # Of Subnets
2	$2^2-2 = 2$
3	$2^3-2 = 6$
4	$2^4-2 = 14$
5	$2^5-2 = 30$
6	$2^6-2 = 62$
7	$2^7-2 = 126$
8	$2^8-2 = 254$
9	$2^9-2 = 510$
10	$2^{10}-2 = 1022$
11	$2^{11}-2 = 2046$
12	$2^{12}-2 = 4094$
13	$2^{13}-2 = 8190$
14	$2^{14}-2 = 16382$

Working With Class B Address 128.10.0.0

Max # Of Subnets	Min # Of Bits	Subnet #	Host #	Max # Of Hosts	128.10.x.y
120	7	119	68	510	128.10.238.68

120 Subnets			
Network ID		Subnet/Host	Host
NNNN NNNN	NNNN NNNN	SSSS SSSH	HHHH HHHH
1000 0000	0000 1010	1110 1110	0100 0100
128	10	238	68

256	128	64	32	16	8	4	2	1
		1	1	1	0	1	1	1
0	0	1	0	0	0	1	1	0

119

Subnet Mask			
Network ID		Subnet/Host	Host
1111 1111	1111 1111	1111 1110	0000 0000
255	255	254	0

23

# Of Bits	Max # Of Subnets
2	$2^2-2 = 2$
3	$2^3-2 = 6$
4	$2^4-2 = 14$
5	$2^5-2 = 30$
6	$2^6-2 = 62$
7	$2^7-2 = 126$
8	$2^8-2 = 254$
9	$2^9-2 = 510$
10	$2^{10}-2 = 1022$
11	$2^{11}-2 = 2046$
12	$2^{12}-2 = 4094$
13	$2^{13}-2 = 8190$
14	$2^{14}-2 = 16382$

20

1110 1110

Working With Class B Address 128.10.0.0

Max # Of Subnets	Min # Of Bits	Subnet #	Host #	Max # Of Hosts	128.10.x.y
120	7	105	352	510	128.10.211.96

120 Subnets			
Network ID		Subnet/Host	Host
NNNN NNNN	NNNN NNNN	SSSS SSSH	HHHH HHHH
1000 0000	0000 1010	1101 0011	0110 0000
128	10	211	96

256	128	64	32	16	8	4	2	1
		1	1	0	1	0	0	1
1	0	1	1	0	0	0	0	0

Subnet Mask			
Network ID		Subnet/Host	Host
1111 1111	1111 1111	1111 1110	0000 0000
255	255	254	0

# Of Bits	Max # Of Subnets
2	$2^2-2 = 2$
3	$2^3-2 = 6$
4	$2^4-2 = 14$
5	$2^5-2 = 30$
6	$2^6-2 = 62$
7	$2^7-2 = 126$
8	$2^8-2 = 254$
9	$2^9-2 = 510$
10	$2^{10}-2 = 1022$
11	$2^{11}-2 = 2046$
12	$2^{12}-2 = 4094$
13	$2^{13}-2 = 8190$
14	$2^{14}-2 = 16382$

Working With Class B Address 128.10.0.0

Max # Of Subnets	Min # Of Bits	Subnet #	Host #	Max # Of Hosts	128.10.x.y
58	6	45	98	1022	128.10.180.98

98 − 64 = 34, 32 = 2

58 Subnets				
Network ID		Subnet/Host	Host	
NNNN NNNN	NNNN NNNN	SSSS SSHH	HHHH HHHH	
1000 0000	0000 1010	1011 0100	0110 0010	
128	10	180	98	

512	256	128	64	32	16	8	4	2	1
				1	0	1	1	0	1
0	0	0	1	1	0	0	0	1	0

Subnet Mask			
Network ID		Subnet/Host	Host
1111 1111	1111 1111	1111 1100	0000 0000
255	255	252	0

/22

# Of Bits	Max # Of Subnets
2	$2^2-2 = 2$
3	$2^3-2 = 6$
4	$2^4-2 = 14$
5	$2^5-2 = 30$
6	$2^6-2 = 62$
7	$2^7-2 = 126$
8	$2^8-2 = 254$
9	$2^9-2 = 510$
10	$2^{10}-2 = 1022$
11	$2^{11}-2 = 2046$
12	$2^{12}-2 = 4094$
13	$2^{13}-2 = 8190$
14	$2^{14}-2 = 16382$

598
512
86
64
22
16
6
8
0

Working With Class B Address 128.10.0.0

Max # Of Subnets	Min # Of Bits	Subnet #	Host #	Max # Of Hosts	128.10.x.y
58	6	48	598	1022	128.10.194.86

58 Subnets			
Network ID		Subnet/Host	Host
NNNN NNNN	NNNN NNNN	SSSS SSHH	HHHH HHHH
1000 0000	0000 1010	1100 0010	0101 0110
128	10	194	

512	256	128	64	32	16	8	4	2	1
				1	1	0	0	0	0
1	0	0	1	0	1	0	1	1	0

Subnet Mask			
Network ID		Subnet/Host	Host
1111 1111	1111 1111	1111 1100	0000 0000
255	255	252	0

/22

# Of Bits	Max # Of Subnets
2	$2^2-2 = 2$
3	$2^3-2 = 6$
4	$2^4-2 = 14$
5	$2^5-2 = 30$
6	$2^6-2 = 62$
7	$2^7-2 = 126$
8	$2^8-2 = 254$
9	$2^9-2 = 510$
10	$2^{10}-2 = 1022$
11	$2^{11}-2 = 2046$
12	$2^{12}-2 = 4094$
13	$2^{13}-2 = 8190$
14	$2^{14}-2 = 16382$

Working With Class B Address 128.10.0.0

Max # Of Subnets	Min # Of Bits	Subnet #	Host #	Max # Of Hosts	128.10.x.y
29	5	28	59	2046	128.10.224.59

29 Subnets			
Network ID		Subnet/Host	Host
NNNN NNNN	NNNN NNNN	SSSS SHHH	HHHH HHHH
1000 0000	0000 1010	1110 0000	0011 1011
128	10	224	59

1024	512	256	128	64	32	16	8	4	2	1
						1	1	1	0	0
0	0	0	0	0	1	1	1	0	1	1

Subnet Mask			
Network ID		Subnet/Host	Host
1111 1111	1111 1111	1111 1000	0000 0000
255	255	248	0

/21

# Of Bits	Max # Of Subnets
2	$2^2-2 = 2$
3	$2^3-2 = 6$
4	$2^4-2 = 14$
5	$2^5-2 = 30$
6	$2^6-2 = 62$
7	$2^7-2 = 126$
8	$2^8-2 = 254$
9	$2^9-2 = 510$
10	$2^{10}-2 = 1022$
11	$2^{11}-2 = 2046$
12	$2^{12}-2 = 4094$
13	$2^{13}-2 = 8190$
14	$2^{14}-2 = 16382$

1069
1024
45
32
13
8
5

Working With Class B Address 128.10.0.0

Max # Of Subnets	Min # Of Bits	Subnet #	Host #	Max # Of Hosts	128.10.x.y
29	5	25	1069	2046	128.10.204.45

29 Subnets			
Network ID		Subnet/Host	Host
NNNN NNNN	NNNN NNNN	SSSS SHHH	HHHH HHHH
1000 0000	0000 1010	1100 1100	0010 1101
128	10	204	45

1024	512	256	128	64	32	16	8	4	2	1
						1	1	0	0	1
1	0	0	0	0	1	0	1	1	0	1

Subnet Mask			
Network ID		Subnet/Host	Host
1111 1111	1111 1111	1111 1000	0000 0000
255	255	248	0

121

# Of Bits	Max # Of Subnets
2	$2^2-2 = 2$
3	$2^3-2 = 6$
4	$2^4-2 = 14$
5	$2^5-2 = 30$
6	$2^6-2 = 62$
7	$2^7-2 = 126$
8	$2^8-2 = 254$
9	$2^9-2 = 510$
10	$2^{10}-2 = 1022$
11	$2^{11}-2 = 2046$
12	$2^{12}-2 = 4094$
13	$2^{13}-2 = 8190$
14	$2^{14}-2 = 16382$

1953
1024
929
512
417
256
161
128
33
32
1

Working With Class A Address 9.0.0.0

Max # Of Subnets	Min # Of Bits	Subnet #	Host #	Max # Of Hosts	128.10.x.y
2000	11	1953	1119	8190	9.244.36.95

1119
1024
95
64
31

2000 Subnets		
Network ID	Subnet	Subnet/Host	Host
NNNN NNNN	SSSS SSSS	SSSH HHHH	HHHH HHHH
0000 1001	1111 0100	0010 0100	0101 1111
9	244	36	95

4096	2048	1024	512	256	128	64	32	16	8	4	2	1
		1	1	1	1	0	1	0	0	0	0	1
0	0	1	0	0	0	1	0	1	1	1	1	1

Subnet Mask			
Network ID	Subnet	Subnet/Host	Host
1111 1111	1111 1111	1110 0000	0000 0000
255	255	224	0

/19

# Of Bits	Max # Of Subnets
2	$2^2-2 = 2$
3	$2^3-2 = 6$
4	$2^4-2 = 14$
5	$2^5-2 = 30$
6	$2^6-2 = 62$
7	$2^7-2 = 126$
8	$2^8-2 = 254$
9	$2^9-2 = 510$
10	$2^{10}-2 = 1022$
11	$2^{11}-2 = 2046$
12	$2^{12}-2 = 4094$
13	$2^{13}-2 = 8190$
14	$2^{14}-2 = 16382$

Working With Class A Address 9.0.0.0

Max # Of Subnets	Min # Of Bits	Subnet #	Host #	Max # Of Hosts	128.10.x.y
2000	11	1949	704	8190	9.243.162.192

2000 Subnets			
Network ID	Subnet	Subnet/Host	Host
NNNN NNNN	SSSS SSSS	SSSH HHHH	HHHH HHHH
0000 1001	1111 0011	1010 0010	1100 0000
9	243	162	192

4096	2048	1024	512	256	128	64	32	16	8	4	2	1
		1	1	1	1	0	0	1	1	1	0	1
0	0	0	1	0	1	1	0	0	0	0	0	0

Subnet Mask			
Network ID	Subnet	Subnet/Host	Host
1111 1111	1111 1111	1110 0000	0000 0000
255	255	224	0

# Of Bits	Max # Of Subnets
2	$2^2-2 = 2$
3	$2^3-2 = 6$
4	$2^4-2 = 14$
5	$2^5-2 = 30$
6	$2^6-2 = 62$
7	$2^7-2 = 126$
8	$2^8-2 = 254$
9	$2^9-2 = 510$
10	$2^{10}-2 = 1022$
11	$2^{11}-2 = 2046$
12	$2^{12}-2 = 4094$
13	$2^{13}-2 = 8190$
14	$2^{14}-2 = 16382$