

Working With Class ~~A~~<sup>B</sup> Address **128.10.0.0**

Max # Of Subnets	# 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	1100 0001	1000 0001
128	10	193	129

128	64	32	16	8	4	2	1
1	0	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

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# 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	$2^{13} - 2 = 8190$

Working With Class A Address **128.10.0.0**

Max # Of Subnets	# Of Bits	Subnet #	Host #	Max # Of Hosts	128.10.X.Y
120	7	119	68	510	128.10.238.18
120	7	105	352	670	128.10.211.96

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
0	0	1	0	0	0	1	0	0

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	0	1	1	0	0	0	0	1

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

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# 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	$2^{13} - 2 = 8190$

Working With Class <sup>B</sup> Address 128.10.0.0

Max # Of Subnets	# Of Bits	Subnet #	Host #	Max # Of Hosts	128.10.X.Y
58	6	45	98	1022	128.10.180.98
58		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	1011 0100	0100 010	
128	10	198	98	

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

58 Subnets				
Network ID		Subnet/Host		Host
NNNN NNNN	NNNN NNNN	SSSS SSHH	HHHH HHHH	
1000 0000	0000 1010	1100 0110	0101 0110	
128	10	144	86	

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

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

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# 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	$2^{13} - 2 = 8190$

Working With Class A Address **128.10.0.0**

Max # Of Subnets	# Of Bits	Subnet #	Host #	Max # Of Hosts	128.10.X.Y
29		28	59		
29		25	1069		

29 Subnets				
Network ID		Subnet/Host		Host
NNNN NNNN	NNNN NNNN	SSSH HHHH		HHHH HHHH
1000 0000	0000 1010			
128	10			

1024	512	256	128	64	32	16	8	4	2	1

29 Subnets				
Network ID		Subnet/Host		Host
NNNN NNNN	NNNN NNNN	SSSS SHHH		HHHH HHHH
1000 0000	0000 1010			
128	10			

1024	512	256	128	64	32	16	8	4	2	1

Subnet Mask				
ID Network		Subnet/Host		Host
1111 1111	1111 1111	1111 1000		0000 0000
255	255	248		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	$2^{13} - 2 = 8190$

Working With Class A Address **9.0.0.0**

Max # Of Subnets	# Of Bits	Subnet #	Host #	Max # Of Hosts	128.10.X.Y
2000	11	1953	1119	8190	9.244.30.47
2000	11	1949	704	8190	

2000 Subnets			
Network ID	Subnet	Subnet/Host	Host
NNNN NNNN	SSSS SSSS	SSSH HHHH	HHHH HHHH
0000 1001	1110100	00100100	00101111
9	244	36	47

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

2000 Subnets			
Network ID	Subnet	Subnet/Host	Host
NNNN NNNN	SSSS SSSS	SSSH HHHH	HHHH HHHH
0000 1001			
9			

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

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

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# 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	$2^{13} - 2 = 8190$