Class B Subnetting Example: 172.17.0.0 - Transition from 3rd to 4th Octets

128 - /17 - 172.17.0.0, 172.17.128.0, 172.18.0.0
Subnets? 2^1 = 2. Hosts? 2^15 – 2 = 32,766 (7 bits in the third octet, and 8 in the fourth).

192 - /18 - 172.17.0.0, 172.17.64.0, 172.17.128.0, 192.0, 172.18.0.0
Subnets? 2^2 = 4. Hosts? 2^14 – 2 = 16,382 (6 bits in the third octet, and 8 in the fourth).

224 - /19 - 172.17.0.0, 172.17.32.0, 172.17.64.0...
Subnets? 2^3= 8. Hosts? 2^13 – 2 = 8190.

240 - /20 - 172.17.0.0, 172.17.16.0, 32.0, 172.17.48.0, 172.17.64.0...
Subnets? 2^4 = 16. Hosts? 2^12 – 2 = 4094.

248 - /21 - 172.17.0.0, 172.17.8.0, 172.17.16.0, 172.17.24.0, 172.17.32.0...
Subnets? 2^5 = 32. Hosts? 2^11 – 2 = 2046.

252 - /22 - 172.17.0.0, 172.17.4.0, 172.17.8.0, 172.17.12.0, 172.17.16.0...
Subnets? 2^6 = 64. Hosts? 2^10 – 2 = 1022.

254 - /23 - 172.17.0.0, 172.17.2.0, 172.17.4.0, 172.17.6.0, 172.17.8.0...
Subnets? 2^7 = 128. Hosts? 2^9 – 2 = 510.

255 - /24 - 172.17.0.0, 172.17.1.0, 172.17.2.0, 172.17.3.0, 172.17.4.0, 172.17.5.0...
Subnets? 2^8 = 256. Hosts? 2^8 – 2 = 254.

128 - /25 - 172.17.0.0, 0.128, 172.17.1.0, 1.128, 172.17.2.0, 172.17.2.128, 172.17.3.0, 172.17.3.128...
Subnets? 2^9 = 512. Hosts? 2^7 – 2 = 126.

192 - /26 - 172.17.0.0, 172.17.0.64, 172.17.0.128, 172.17.0.192, 172.17.1.0, 172.17.1.64...
Subnets? 2^10 = 1024. Hosts? 2^6 – 2 = 62.

224 - /27 - 172.17.0.0, 172.17.0.32, 172.17.0.64, 172.17.0.96, 172.17.0.128, 172.17.0.160...
Subnets? 2^11 = 2048. Hosts? 2^5 – 2 = 30.

240 - /28 - 172.17.0.0, 172.17.0.16, 172.17.0.32, 172.17.0.48, 172.17.0.64, 172.17.0.80...
Subnets? 2^12 = 4096. Hosts? 2^4 – 2 = 14.

Mask	***CIDR***	***Block Size***	***Increments***
128	/25 /17 /9	128	128, 256
192	/26 /18 /10	64	64, 128, 192, 256
224	/27 /19 /11	32	32, 64, 96, 128, 160, 192, 224, 256
240	/28 /20 /12	16	16, 32, 48, 64, 80, 96, 112, 128, 144, 160, 176, 192, 208, 224, 240, 256
248	/29 /21 /13	8	8, 16, 24, 32, 40, 48, 56, 64, 72, 80, 88, 96, 104, 112, 120, 128, 136, 144, 152, 160, 168, 176, 184, 192, 200, 208, 216, 224, 232, 240, 248, 256
252	/30 /22 /14	4	4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, 84, 88, 92, 96, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 144, 148, 152, 156, 160, 164, 168, 172, 176, 180, 184, 188, 192, 196, 200, 204, 208, 212, 216, 220, 224, 228, 232, 236, 240, 244, 248, 252, 256
254	/31 /23 /15	2	2, 4, 6...
255	/32 /24 /16	1	

	Leading Bits	***Starts At***	***Net Bits***	***Bits Left***	***# of Nets***	***Hosts per Net***
Class A	0xxx, 1-126	1.0.0.0	8	24	128	16,777,216
Class B	10xx, 128-191	128.0.0.0	16	16	16,384	65,534
Class C	110x, 192-223	192.0.0.0	24	8	2,097,152	254
Class D	1110, 224-239	224.0.0.0	-	-	-	-
Class E	1111, 240-254	240.0.0.0	-	-	-	-