

Subnetting Cheat Sheet

Mask octet values

128 · 192 · 224 · 240 · 248 · 252 · 254 · 255

Place values

128 · 64 · 32 · 16 · 8 · 4 · 2 · 1

CIDR reference

CIDR	Mask	Wildcard	Block	Hosts
/20	255.255.240.0	0.0.15.255	16 (3rd)	4,094
/21	255.255.248.0	0.0.7.255	8 (3rd)	2,046
/22	255.255.252.0	0.0.3.255	4 (3rd)	1,022
/23	255.255.254.0	0.0.1.255	2 (3rd)	510
/24	255.255.255.0	0.0.0.255	256	254
/25	255.255.255.128	0.0.0.127	128	126
/26	255.255.255.192	0.0.0.63	64	62
/27	255.255.255.224	0.0.0.31	32	30
/28	255.255.255.240	0.0.0.15	16	14
/29	255.255.255.248	0.0.0.7	8	6
/30	255.255.255.252	0.0.0.3	4	2
/31	255.255.255.254	0.0.0.1	2	2 (RFC 3021)
/32	255.255.255.255	0.0.0.0	1	1 (host route)

Block-size method (any question in 4 steps)

- 1. Interesting octet = where mask \neq 255 and \neq 0
- 2. Block size = 256 – mask value (e.g. /26 \rightarrow 256–192 = 64)
- 3. Subnet boundaries = multiples of block size (0, 64, 128, 192...)
- 4. Network = boundary below your address · Broadcast = next boundary – 1 · Hosts = in between

Formulas: Subnets = $2^{\text{borrowed bits}}$ · Usable hosts = $2^{\text{host bits}} - 2$ · Wildcard = 255 – mask octet (= block – 1)

Practice free: attilatechnologies.in/subnetting-practice-questions.html · Full guide: [/subnetting-complete-guide.html](http://attilatechnologies.in/subnetting-complete-guide.html)