

- ✓ 73. Table 3.21 is a routing table using CIDR. Address bytes are in hexadecimal. The notation “/12” in C4.50.0.0/12 denotes a netmask with 12 leading 1 bits: FFF0.0.0. State to what next hop the following will be delivered:
- (a) C4.4B.31.2E
 - (b) C4.5E.05.09
 - (c) C4.4D.31.2E
 - (d) C4.5E.03.87
 - (e) C4.5E.7F.12
 - (f) C4.5E.D1.02

Table 3.21 Routing Table for Exercise 73

Net/MaskLength	NextHop
C4.5E.2.0/23	A
C4.5E.4.0/22	B
C4.5E.C0.0/19	C
C4.5E.40.0/18	D
C4.4C.0.0/14	E
C0.0.0.0/2	F
80.0.0.0/1	G

74. An ISP that has authority to assign addresses from a /16 prefix (an old class B address) is working with a new company to allocate it a portion of address space based on CIDR. The new company needs IP addresses for machines in three divisions of its corporate network: Engineering, Marketing, and Sales. These divisions plan to grow as follows: Engineering has 5 machines as of the start of year 1 and intends to add 1 machine every week, Marketing will never need more than 16 machines, and Sales needs 1 machine for every 2 clients. As of the start of year 1, the company has no clients, but the sales model indicates that, by the start of year 2, the company will have 6 clients and each week thereafter will get one new client with probability 60%, will lose one client with probability 20%, or will maintain the same number with probability 20%.