input Age 31 – 40, income=high
student=yes, credit=fair)

age	income	student	credit_rating	com
<=30	high	no	fair	no
<=30	high	no	excellent	no
31…40	high	no	fair	yes
>40	medium	no	fair	yes
>40	low	yes	fair	yes
>40	low	yes	excellent	no
31…40	low	yes	excellent	yes
<=30	medium	no	fair	no
<=30	low	yes	fair	yes
>40	medium	yes	fair	yes
<=30	medium	yes	excellent	yes
31…40	medium	no	excellent	yes
31…40	high	yes	fair	yes
>40	medium	no	excellent	no

Prob (buy?|X) = P(x|buy?) P(buy

P(credit = "y") = 9/14 = 0.643

P(credit = "N") = 5/14 = 0.357

P(age = "31–40" | buy = "y") = 5/10 = 0.5

P(age = "31–40" | buy = "N") = 1/6 = 0.167

P(income "high" | buy = "y") = 2/9 = 0.222

P(income "high" | buy = "No") = 2/5 = 0.4

P(student "yes" | buy = "y") = 6/9 = 0.667

P(student "yes" | buy = "N") = 1/5 = 0.2

P(credit "fair" | buy = "y") = 6/9 = 0.167

P(credit "fair" | buy = "N") = 2/5 = 0.4

X(age=31–40, income=high, studen=yes, credit=fair)

P(x|buy = "y") = 0.5 × 0.22 × 0.167 × 0.667 = 0.048

P(x|buy = "N") = 0.167 × 0.4 × 0.2 × 0.4 = 0.005

P(x/Ci) × P(Ci): y = 0.643 × 0.048 = 0.03 ※ answer

N = 0.357 × 0.005 = 0.00178