Homework

Prior Probability

P (class=Y) =5/8=0.625(62.5%)

P(class=N) =3/8=0.375(37.5%)

|  |  |  |
| --- | --- | --- |
|  | Class=Y | Class=N |
| Chills = Y | 3/5=0.6 | 1/3=0.33 |
| Chills = N | 2/5=0.5 | 2/3=0.67 |
| Runny nose = Y | 4/5=0.8 | 1/3=0.33 |
| Runny nose = N | 1/5=0.2 | 2/3=0.67 |
| Headache = mild | 2/5=0.4 | 1/3=0.33 |
| Headache = No | 1/5=0.2 | 1/3=0/33 |
| Headache = strong | 2/5=0.5 | 1/3=0.33 |
| Fever=Y | 4/5=0.8 | 1/3=0.33 |
| Fever=N | 1/5=0.2 | 2/3=0.33 |
| Prior Probability | 0.625 | 0.375 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Chills | Runny nose | Headache | Fever | Flu? |
| Y | N | MILD | Y | ? |

* Class = Y

0.62 × 0.6 × 0.2 × 0.4 × 0.8 = 0.023808

* Class = N

0.37 × 0.33 × 0.67 × 0.33 × 0.33 = 0.00890

Class is Y