Question:

200 adults are classified according to sex and their level of education .28 are male and in elementary school, 38 are male and secondary ,45 are female and secondary, 17 are female and college, 39 are in college and 112 are female

If a person is selected at random from this group, then

1) The probability that he is a male:

2) The probability that the person is a male given that the person has a secondary education is:

3) The probability that the person does not have a college degree given that the person is a female is:

4) Are the events male and elementary independent?

Solution:

|  |  |  |  |
| --- | --- | --- | --- |
|  | Male | Female | Total |
| Elementary | 28 | 50 | 78 |
| Secondary | 38 | 45 | 83 |
| College | 22 | 17 | 39 |
| Total | 88 | 112 | 200 |

1. 0.44
2. 0.4578
3. 0.8482
4. P(male)=0.44 ≠ p(male/elementary)= 0.359

Or

P(male ∩ elementary) ≠ p(male)×p(elementary)