

Answers

Suppose the joint frequency distribution below represents job applicants to IBM in a particular year. Event A represents applicants who were hired. Event B represents applicants who have a college degree.

	Event A	Event $\bar{A}$	Total
Event B	560	285	845
Event $\bar{B}$	750	465	1215
Total	1310	750	

- A. What is the number of observations?
- B. Interpret the 465 above? Would it be considered the intersection of two events or a union? What are the two events?
- C. Generate the joint probability distribution.

	Event A	Event $\bar{A}$	Marginal Probability
Event B			
Event $\bar{B}$			
Marginal Probability			

- D. What is the probability that an applicant had a college degree?
- E. What is the probability that an applicant had a college degree and was hired? (Is this an intersection, union or conditional probability?)
- F. What is the probability that an applicant was hired?
- G. *Given* that an applicant had a college degree, what is probability that he/she was hired? (Is this an intersection, union or conditional probability?)
- H. What is the probability that an applicant was not hired?
- I. Why do the answers for questions F and H sum to one?
- J. $P(A | \bar{B}) =$

- K. IBM hired more people without a college degree last year than those with a degree. (True or False)
- L. The probability of being hired by IBM was greater if the applicant had a college degree. (True or False)