Stat 2153 - Statistical Methods

Quiz #4 - 2008.02.25

Solutions

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	letter grade			
Calculator	A	B	C	D or less
TI brand	5	6	3	3
other brand	1	5	2	2

The completely fictional table above breaks down the exam scores of students in a Stats class based on scores and the calculator used. Use it to answer the following questions, assuming in each question, that a person is picked at random.

1. What is the probability that the person picked received a grade of A?

Receiving a grade of A corresponds to the first column. There are 6 people who received an A, out of 27. So the probability is $\frac{6}{27} \approx 0.222$.

2. What is the probability that the person picked used a TI calculator?

People using a TI calculator correspond to the first row, which adds to 17. The probability is thus $\frac{6}{27} \approx 0.63$.

3. What is the probability that the person picked received a grade of *C or less*?

This corresponds to the last *two* columns of the array. So we have $\frac{10}{27} \approx 0.37$.

4. What is the probability that the person picked used a TI calculator or received a grade of B?

Here we add the entries in column 2 and row 1, remembering not to add the intersection twice. We have $\frac{6+5+5+3+3}{27} = \frac{22}{27} \approx 0.815$.

5. What is the probability that the person picked used a *non-TI* calculator and received a grade of *B or better*?

This corresponds to the intersection of row 2 and columns 1 and 2. Adding all these entries together gives $\frac{1+5}{27} = \frac{6}{27} \approx 0.222$.