**Quiz #4: Module 15, Part 3 Quiz!**

1. This table summarizes the real results for a survey of firefighters and other crisis responders (such as police, EMT, etc.) in the New York area.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  No alcohol problems | Moderate to severe alcohol problems | Totals |
| Participated in 9/11 rescue | 793 | 309 | 1,102 |
| Did not participate in 9/11 rescue | 441 | 110 | 551 |
| Totals | 1,234 | 419 | 1,653 |

 **Question:** Does this data indicate that participating in 9/11 increases the risk of having moderate to severe alcohol problems?

1. What would the explanatory and response variables be in this situation? Explain why.
2. Compare appropriate percentages to answer the question (Show what fractions you used and write them as **percentages** – you should have **TWO** fractions).
3. What kind of probabilities did you find (joint, marginal or conditional)? Write the probabilities you found using the appropriate notation.
4. Calculate the **percentage change** and use it to answer the question posed. (Make sure you explain, in a sentence, what it means by using it to answer the question posed.) Please show your work so if you made a mistake, I can correct it.