Unit 4 Discussion Example - Applications of Probability

## Post 1: Initial Response

1) Here is my data:

|  | Employee has run <br> a computer <br> security scan in the <br> past 60 days. | Employee has NOT <br> run a computer <br> security scan in the <br> past 60 days. | Total |
| :---: | :---: | :---: | :---: |
| Employee has installed <br> the latest patches to <br> the operating system <br> on their computer. | 57 | 212 | 269 |
| Employee has not <br> installed the latest <br> patches to the <br> operating system on <br> their computer. | 187 | 44 | 231 |
|  | 244 | 256 | 500 |
| Total | 24 |  |  |

2) $P$ (has NOT run security scan) $=256 / 500=0.512=51.2 \%$
$P($ has NOT installed latest patches) $=231 / 500=0.462=46.2 \%$
$P$ (has NOT installed the latest patches but has run security scan) $=187 / 500=0.374=37.4 \%$
$P($ has installed the latest patches but has NOT run security scan $)=212 / 500=0.424=42.4 \%$
3) Based on an analysis of my sample of 500 employees, I would say that the likelihood of a computer breach is moderate. You can see that over $50 \%$ of the employees have NOT run a security scan. This is most concerning. The number one method for prevention of security breaches it to regularly perform security scan. Furthermore, you can see that a only half of the employees HAVE installed the latest patches of the operating system, which means that half HAVEN'T installed the latest patches to the operation system. This too contributes greatly towards a security breach and action should be taken to fix this!
