### Station #1

You work for a construction company and are trying to determine if you want to take a job on. If the weather is good, you can make a profit of $4,500. The extended forecast has predicted 60% chance of bad weather over the next week. If that is the case, your company stands to lose $3,000. What is your companies expected value if they take on the job?

Dec 1-10:51 AM

### Station #2

In a pizza takeout restaurant, the following probability distribution was obtained. The random variable x represents the number of toppings for a large pizza.

| x | P(x) |
|---|------|
| 0 | 0.30 |
| 1 | 0.40 |
| 2 | 0.20 |
| 3 | 0.06 |
| 4 | 0.04 |

Find the mean and standard deviation.

Is it unusual for some one to order 4 toppings?

Dec 1-10:55 AM

### Station #3

A twenty-five-year-old man decides to pay $325 for a one-year insurance policy with coverage for $1,000,000. The probability of him living through the year is 0.9995. What is his expected value for the insurance policy?

Dec 1-12:06 PM

### Station #4

a) Decide whether the experiment is a binomial experiment. If it is not, explain why. You test four pain relievers. The random variable represents the pain reliever that is most effective.

Answer: Not a binomial experiment. There are more than two outcomes.

b) Decide whether the experiment is a binomial experiment. If it is not, explain why. Testing a pain reliever using 20 people to determine if it is effective. The random variable represents the number of people who find the pain reliever to be effective.

Answer: binomial experiment.

c) Decide whether the experiment is a binomial experiment. If it is not, explain why. Surveying 100 prisoners to see how many crimes on which they were convicted. The random variable represents the number of crimes on which each prisoner was convicted.

Answer: Not a binomial experiment. There are more than two outcomes.

d) Decide whether the experiment is a binomial experiment. If it is not, explain why. Surveying 100 prisoners to see whether they are serving time for their first offense. The random variable represents the number of prisoners serving time for their first offense.

Dec 1-12:08 PM

### Stations #5

A test consists of 10 true or false questions. To pass the test a student must answer at least eight questions correctly. If the student guesses on each question, what is the probability that the student will pass the test?

Dec 1-12:10 PM

### Stations #6

In a recent survey, 80% of the community favored building a police substation in their neighborhood. If 15 citizens are chosen, find the probability that exactly 10 of them favor the building of the police substation.

Dec 1-12:12 PM

Station #7

Create a binomial distribution table for a couple having 3 kids .

x = # girls            p(x)

Dec 1-12:14 PM

Station #8

Probability someone buys a cup of coffee in the morning if they stop at a local gas station is 28%. Create a table for 4 people stopping at the gas station.

x = people who buy coffee            p(x)

Dec 2-8:37 AM