Question 1

4 pts

Let $X \sim \text{Geometric}(p)$ with $p = 0.1$. Find $E[X]$.

Question 2

4 pts

A class consists of 12 business majors and 6 mathematics majors. A committee of 7 is selected at random to work on a project. What is the probability of getting exactly 5 business majors and 2 mathematics majors?

Question 3

4 pts

Phone calls are received at a certain residence as a Poisson process with parameter $\lambda = 2$ per hour. What is the probability of exactly one phone call during an hour?

Question 4

4 pts

Let X always take value 1.2 and Y also always take value 1.2. Then the two random variables X and Y are not independent.

- ○ True
- ○ False

Question 5

4 pts

Consider the following breakdown of all adults in a small population by educational attainment and employment status.

	Hs diploma	College degree	Graduate degree
Unemployed	23	16	7
Employed	120	180	25

If we choose a population member at random, what is the probability we get a member who is unemployed?