DISCRETE RANDOM VARIABLES: PRACTICE 4; GEOMETRIC DISTRIBUTION

STUDENT LEARNING OUTCOMES:

- **THE STUDENT WILL INVESTIGATE THE PROPERTIES OF A GEOMETRIC DISTRIBUTION.**

GIVEN:

Use the information from the Binomial Distribution problem. Suppose that you will randomly one freshman from the study until you find one who expects to work full-time while in college. You are interested in the number of freshmen you must ask.

INTERPRET THE DATA

1. In words, define the Random Variable X.

2. X ~ _____

3. X takes on the values: _____

4. Construct the probability distribution function (PDF) for X. Stop at X = 6.

x	P(X=x)

5. On average (μ), how many would you expect to have to ask until you found a freshmen who expects to work full-time while in college?

6. What is the probability that you will need to ask fewer than 3 freshmen?

7. Construct a histogram or plot a line graph.
   Label the horizontal and vertical axes with words. Include numerical scaling.