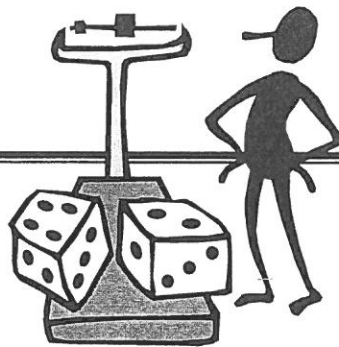


Chapter 17: Probability Models



Key Vocabulary:

- Bernoulli trials
- Geometric model
- Binomial model

Calculator Skills:

- `geometpdf(`
- `geometcdf(`
- `binompdf(`
- `binomcdf(`

1. List three characteristics of Bernoulli trials.
2. What is the variable of interest in a *geometric model*?
3. How do you find the *expected value* and *standard deviation* of a *geometric random variable*?
4. In the *geometric distribution*, what does the parameter p represent?
5. If X has a *geometric distribution*, what does $(1 - p)^{n-1}p$ represent?
6. What is the difference between a *probability distribution function* (pdf) and a *cumulative distribution function* (cdf)?
7. What is the variable of interest in a *binomial model*?



8. Explain the difference between the *binomial setting* and the *geometric setting*.

9. How do you find the *expected value* and *standard deviation* of a *binomial random variable*?

10. In the *binomial distribution*, what do parameters n and p represent?

11. What is meant by $B(n, p)$?

12. In the formula $\binom{n}{k} = \frac{n!}{k!(n-k)!}$, what does n represent? What does k represent?

What does the value of $\binom{n}{k} = \frac{n!}{k!(n-k)!}$ represent?

13. Complete the following table of values:

1!	1	1
2!	2 x 1	2
3!	3 x 2 x 1	6
4!	4 x 3 x 2 x 1	24

5!	5 x 4 x 3 x 2 x 1	
6!		
7!		
n!		

14. What is the value of $\frac{n!}{(n-1)!}$?