

Extra Questions

1) A customer randomly selects two RAM modules from a shipment of six known to contain two defective modules.

- a)** Create the probability distribution for x , the number of defective modules in the purchase.
- b)** Compute the expected number of defective RAM modules the customer would purchase.

2) A drawer contains four red socks and two blue socks. Three socks are drawn from the drawer without replacement.

- a) Create a probability distribution in which the random variable represents the number of red socks.
- b) Determine the expected number of red socks if three are drawn from the drawer without replacement.

3) There are five cats and seven dogs in a pet shop. Four pets are chosen at random for a visit to a children's hospital.

- a) Create a probability distribution for the number of dogs chosen for a random visit to the hospital.
- b) What is the probability that at least one dog is chosen to go?
- c) What is the expected number of dogs chosen?

4) A 12-member jury for a criminal case will be selected from a pool of 14 men and 11 women.

a) What is the probability that the jury will have an equal number of men and women?

b) What is the probability that at least 3 jurors will be women?

c) What is the expected number of women? (Note: the formula $E(x) = r \left(\frac{a}{n} \right)$ can be used for hypergeometric distributions)

5) The door prizes at a dance are four \$10 gift certificates, five \$20 gift certificates, and three \$50 gift certificates. The prize envelopes are mixed together in a bag, and five prizes are drawn at random.

a) Create a probability distribution for the number of \$10 gift certificates drawn.

b) What is the expected number of \$10 gift certificates drawn?