

### **Module 5E Questions:**

1. Which of the follow statements about distributions is not true?
  - a. The normal distribution can be used as an approximation to the binomial distribution
  - b. The Poisson distribution is used under conditions where  $n$  approaches 0 while  $p$  approaches infinity
  - c. The binomial distribution expresses the probability of getting  $X$  successes out of  $n$  trials
  - d. As degrees of freedom increase, the  $X^2$  distribution approaches a normal distribution
2. Singleton babies born have a mean weight of 3.339 kg and a standard deviation of 0.573 kg.
  - a. What is the probability a newborn weighs more than 5 kg?
  - b. What is the probability a newborn weighs between 3 kg and 4 kg?
  - c. What fraction of newborns will be  $> 1.5$  sd from the mean?
  - d. What fraction of newborns will be  $> 1.5$  kg from the mean?
  - e. A random sample of 10 newborns is taken, what is the probability that their mean weight would be  $> 3.5$  kg?