# Statistics 511 Worksheet 4

A college professor always finishes his lectures within 2 minutes after the bell rings to end the period and the end of the lecture. Let *X* = the time that elapses between the bell and the end of the lecture and suppose the pdf of *X* is



a. Find the value of *k*.

We have found the value of *k* to be

b. What is the probability that the lecture ends within 1minutes of the bell ringing?

The probability that the lecture ends within 1 minute of the bell ringing will be . . .

c. What is the probability that the lecture continues beyond the bell for between 60 and 90 seconds?  
  
90 seconds is 1.5 minutes ( minutes).

d. What is the probability that the lecture continues for at least 90 seconds beyond the bell?