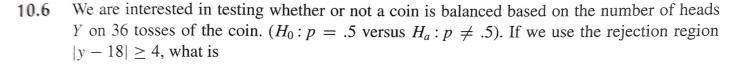
Let  $Y_1, Y_2, \ldots, Y_n$  denote a random sample from a Poisson distribution with parameter  $\lambda$ . Show by conditioning that  $\sum_{i=1}^{n} Y_i$  is sufficient for  $\lambda$ . 9.39

Let  $Y_1, Y_2, \ldots, Y_n$  be a random sample from a normal distribution with mean  $\mu$  and variance 1. 9.64

- Show that the MVUE of  $\mu^2$  is  $\widehat{\mu^2} = \overline{Y}^2 1/n$ . Derive the variance of  $\widehat{\mu^2}$ .



a the value of  $\alpha$ ?

**b** the value of  $\beta$  if p = .7?

10.18	The hourly wages in a particular industry are normally distributed with mean \$13.20 and standard deviation \$2.50. A company in this industry employs 40 workers, paying them an average of \$12.20 per hour. Can this company be accused of paying substandard wages? Use an $\alpha=.01$ level test.