6.96 a. By Theorem 6.9, the sampling distribution of $\bar{y}$ is approximately normal with

-

$$P(\bar{y} \le 6):$$

6.106 a. By Theorem 6.9, the sampling distribution of $\bar{y}$ has an approximate normal distribution

6.120 To use Theorem 6.7, we must first find the cumulative distribution function of y.

$$F(y) = \int_{1}^{y} 2(t-1)dt:$$

Let $g = F(y) = (y-1)^2$. By Theorem 6.7,

7.8 a. The moment estimator of p is found by setting the 1st population moment, $E(y_i)$, equal to the first sample moment, $\bar{y}$. For the binomial experiment $E(y_i) = p$.

7.20 a. $E(\bar{y}_1 - \bar{y}_2) = E(\bar{y}_1) - E(\bar{y}_2)$

$$= E\left(\frac{y_1 + y_2 + \cdots + y_n}{n_1}\right) - E\left(\frac{y_1 + y_2 + \cdots + y_n}{n_2}\right)$$

7.24 a. The 95% confident interval is shown on the printout

7.32 Some preliminary calculations:

$$\bar{y} = \frac{\sum y}{n} = \frac{6.44}{6} = 1.073$$

7.38 a.

$$s_p^2 = \frac{(n_1 - 1)s_1^2 + (n_3 - 1)s_3^2}{n_1 + n_3 - 2}$$:

7.44 a. Let μ_1 = mean change in S_V for sintering time of 10 minutes and μ_2 = mean change in S_V for sintering time of 150 minutes.