Math 181A Homework 7 Solution

6.3.1
(a)
By Theorem 6.3.1,
\[ Z = \frac{24 - 52 \times 0.4}{\sqrt{52 \times 0.4 \times 0.6}} = 0.256 < 1.65 = z_{0.05} \]
\(H_0\) is accepted. The technique may not work.
(b)
p value is \(1 - \Phi(Z) = 0.40\). \(H_0\) will be rejected for \(\alpha > 0.40\).

6.3.9
(a)
\[ \alpha = \mathbb{P}_{H_0}(k \leq 3) = \sum_{k=0}^{3} \binom{7}{k} 0.75^k 0.25^{7-k} = 0.07 \]
(b)