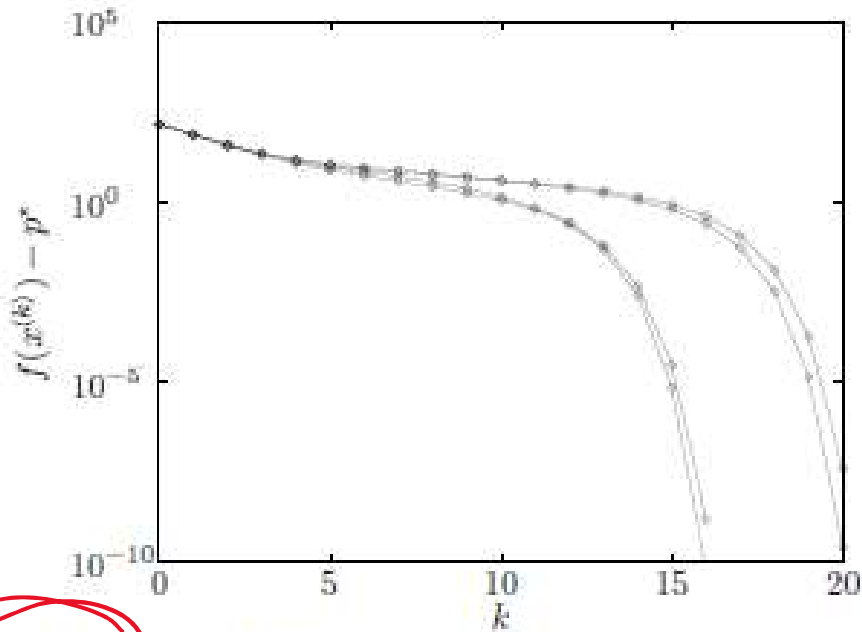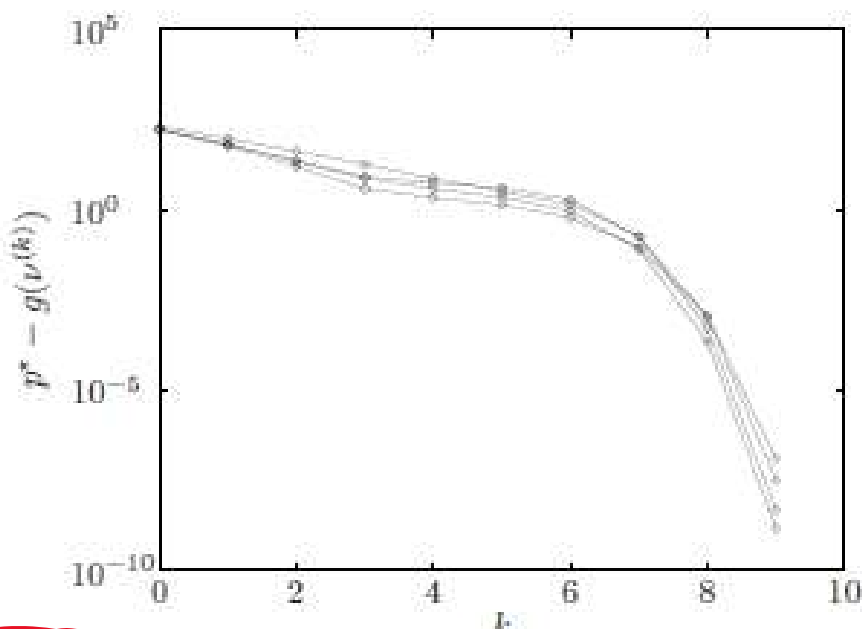# Section 10.4.3

Figure 10.6 Error $f(x^{(k)}) - p^*$ in Newton's method, applied to an equality constrained analytic centering problem of size $p = 100$, $n = 500$. The different curves correspond to four different starting points. Final quadratic convergence is clearly evident.
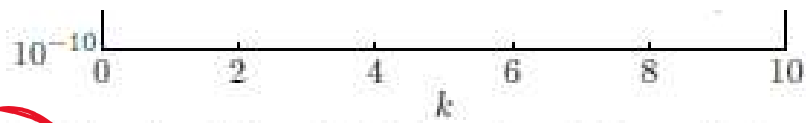
10^{-10}

0   2   4   6   8   10

k

Figure 10.7 Error $|g(\nu^{(k)}) - p^*|$ in Newton's method, applied to the dual of the equality constrained analytic centering problem.

10^{10}

10^5

10^0

10^{-5}

10^{-10}

10^{-15}

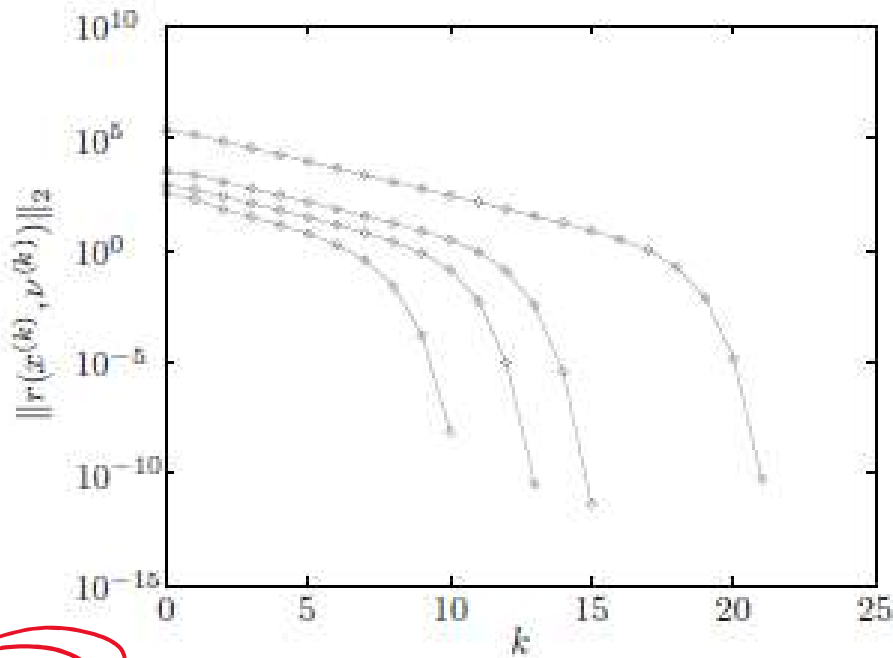0   5   10   15   20   25

k

$\|r(x^{(k)}, \nu^{(k)})\|_2$

Figure 10.8 Residual $\|r(x^{(k)}, \nu^{(k)})\|_2$ in the infeasible start Newton method, applied to the equality constrained analytic centering problem.