Continuous Optimization: Assignment 1

Due on April 30, 2014

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Exercise 1

(a)

$$
\begin{aligned}
lim_{k\to\infty} x^{(k)} &= lim_{k\to\infty} \frac{k^4 - 100}{5k^3 + 30k^4} \\
&= lim_{k\to\infty} \frac{1 - \frac{100}{k^4}}{\frac{5}{k} + 30} \\
&= \frac{1 - 0}{0 + 30} \\
&= \frac{1}{30}
\end{aligned}
$$