

**EX.1.4.7, Sauer3**

**Langou**

Let  $f(x) = x^4 - 7x^3 + 18x^2 - 20x + 8$ . Does Newton's Method converge quadratically to the root  $r = 2$ ? Find  $\lim_{i \rightarrow \infty} e_{i+1}/e_i$ , where  $e_i$  denotes the error at step  $i$ .