

10. You are using Newton's method with deflation to find the roots of $f(x) = 0$. You have approximated a root at $r_1 \approx 1.95$, a root at $r_2 \approx 1.85$, and a root at $r_3 \approx 1.75$. Do one iteration of the Newton procedure with deflation, starting with $x_0 = 1.5$ and using the previously found roots r_1 , r_2 , and r_3 . The values of $f(x)$ and some of its derivatives at 1.5 are $f(1.5) = 0.5$, $f'(1.5) = 3$, and $f''(1.5) = 4$.