EX.1.4.4, Sauer3

Use Theorem 1.11 or 1.12 to estimate the error e_{i+1} in terms of the previous error e_i as Newton's Method converges to the given roots. Is the convergence linear or quadratic?

a. $32x^3 - 32x^2 - 6x + 9 = 0, \qquad r = -\frac{1}{2},\ r = \frac{3}{4};$

b. $x^3 - x^2 - 5x - 3 = 0, \qquad r = -1,\ r = 3.$