

### Newton's approximation problems

1. The equation  $2x^3 - x - 4 = 0$  has a solution near 1.5. Using Newton's method with  $x_0 = 1.5$ , find  $x_1$  and  $x_2$ . Approximate the solution to six decimal places.
2. Use Newton's approximation with an initial guess of  $x_0 = 5$  to approximate  $\sqrt[3]{120}$ . List the values of  $x_1$ ,  $x_2$ ,  $x_3$ , and  $x_4$  to six decimal places.