Section 4.8: Newton's Method

(1) In this section, we talk about Newton's Method. What is Newton's method used for?

(2) Sketch the graph of a function with at least two zeros. Illustrate Newton's method on your sketch. Show how different starting points can lead to different zeros.

(3) When we are going Newton's method repeatedly, it is sometimes helpful to remember the formula for the next x_i value. What is that formula? How does it work?

(4) What can go wrong if we are trying to do Newton's method? Give an example with both a sketch and a algebraic expression for your function. Be sure to include the starting point.

Extra Practice in Book: 4.8: 1, 3, 5, 7, 33