

## The First Derivative Test (4.3)

### Expected Skills.

At the end of this section, students should be able to:

- use the first derivative test to determine the nature of an extremum.

**Pre-Class Activity** (ch4-applications-4-firstderivtest-1-pc). The pre-class activity asks students to graph functions which have certain properties. The goal here is to prepare the discussion on the first derivative test, i.e. how do we determine the nature of critical point by looking at its first derivative.

**Worksheet** (ch4-applications-4-firstderivtest-2-ws). The first activity on the worksheet is similar to the one in the pre-class activity. The difference is that here we use the terminology of local min/max.

The second exercise is a more “traditional” application of the First Derivative Test where we ask the students to find the local min/max of a function.