This homework introduces a **big idea:**

> Given one point on a function, and sufficient rate of change data, it is possible to recreate the original function.

This can be very difficult to do with a lot of accuracy. We will spend the rest of the semester getting good at this. Today’s goals are fairly modest:

1. Given one point on $f$, and some of $f'$ data, sketch a bad graph of $f$.

   **Notes:**
   - Many different looking graphs could be correct answers.
   - WebAssign cannot give you feedback on your graph.
   - It is very important to get feedback from someone.

2. After you create your graph you will answer some questions about it in WebAssign. These will be limited submission questions, often with penalties assigned for every incorrect submission. **Get feedback on your graph** before you attempt the questions.

3. Some of the questions will use new vocabulary: local maximum and local minimum.

   Learn these terms. Also know the plurals: maxima, minima, and extrema (both kinds).

   Khan Academy has a [nice video](#) and your textbook covers this in Section 4.2

   **Note:** Different books have different opinions on whether or not an endpoint can be a local extrema. For this class, **endpoints are not local extrema.**