I'd like to introduce you to someone with whom you will become well acquainted in AP Calculus: ***our friend the particle moving along a line***.

In the applet below this document, click the play button in the lower left to start the particle in motion. If you pause the motion, you can see the particle's coordinate at a particular time by dragging the black point or by typing "t =" and then some value into the input line. Clicking the circular double arrow icon in the upper right will reset the applet.

As you experiment with the applet, write down the following on a piece of paper

1. At least 6 things you notice about the particle’s motion
2. At least one question of a mathematical nature about the particle’s motion that you think, but aren’t quite sure, you know the answer to
3. Your answer to the question you wrote in #2, and an indication of what causes you uncertainty about this answer
4. At least two questions of a mathematical nature about the particle’s motion that seem harder to answer than the question you wrote in #2
5. An attempt to find the answer to at least one of the questions you wrote down in #4 or, if you really can’t think of any way to begin, include some reflection on why this question is a difficult one to get started on.