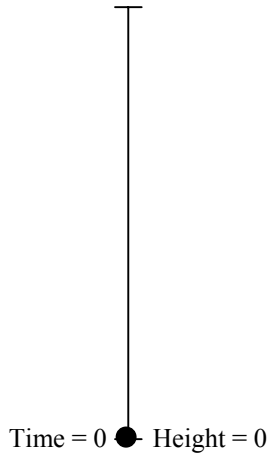
Activity 2: Quadratic Modeling

1. Consider the position equation $h(x) = 96x - 16x^2$, where x is the time in seconds and h is the height of an object thrown straight up at 96 ft/sec. Build a table and graph. When does the object peak? When does it land? a.

2. Graph $y = 96x - 16x^2$ in a suitable viewing window. Using the trace or table feature, fill in the following chart. Then locate the position of the object on the vertical number line at each time.

Time (sec.)	Height (feet)
0	
1	
2	
3	
4	
5	
6	



When does the object peak? When does it land? What is the average rate of change between 1 and 2 seconds? Between 1 and 1.1 seconds?

3. How would you model the ball throw parametrically?