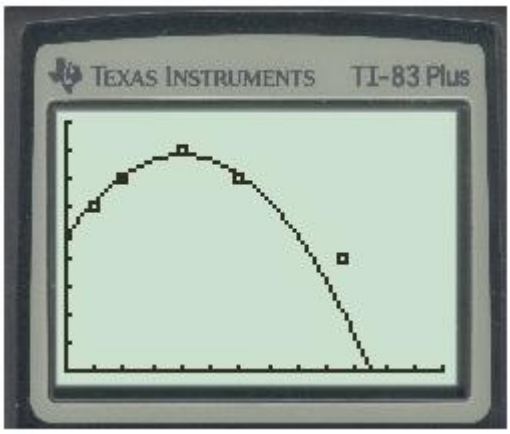
Gaming Quadratic Regression Activity

- Have students select an image of a quadratic equation in real-life. Superimpose a coordinate plane on top of it.
- Select at least 5 coordinates that lie on the graphed parabola.
- Use Quadratic Regression on the calculator to write the equation.
- Prove it should be Quadratic Regression by showing the second differences.
- State the maximum/minimum, roots/zeros, and y-intercept.
- Write a sentence to explain the answers from the question above in terms of the image.
- Provided images below for a reduced score for not finding/creating their own image.

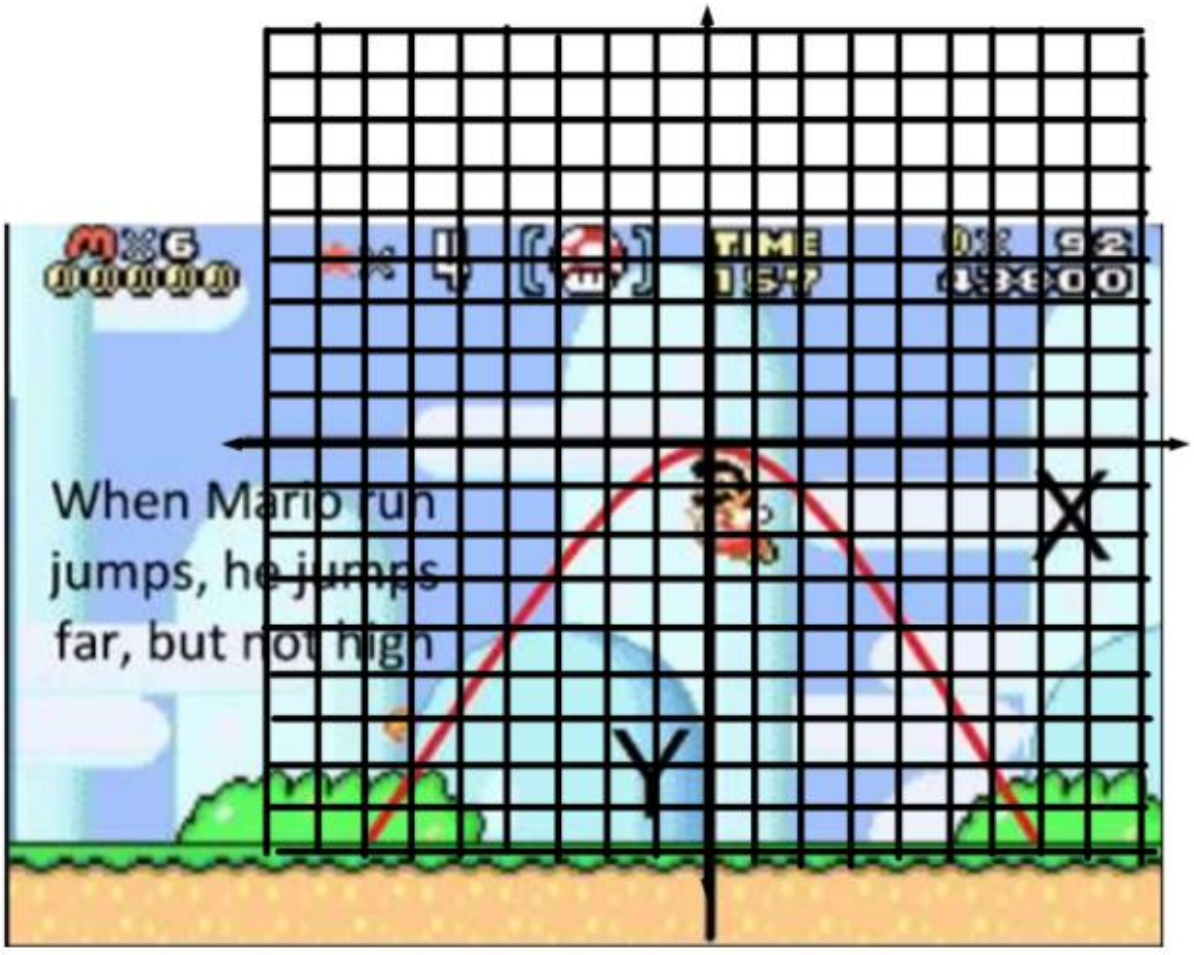
This is the picture I projected on the screen. There is more angry bird/quadratic function material out there on the world wide web that is better than this. However, I couldn't find exactly what I needed with the materials I had (I wanted a screen shot of an angry bird, whose path wasn't yet finished, with a grid on top). So, I made this one on Word using a picture I found on the internet. Be nice. It took much longer than one would think.



We chose some points that the top parabola passes through and then fit a quadratic regression using those points. I then asked if the students thought the bird would hit the ice block (around (9.5, 4)). The results for this varied depending on the class and what points they chose to input into their lists (which is fascinating).

Below gives a picture of the points we plotted in one of the classes, the quadratic regression, and the point (9.5,4), which was plotted post finding the regression.


HIGHSCORE: 77950
SCORE: 15280


When Mario run jumps, he jumps far, but not high
X
Y