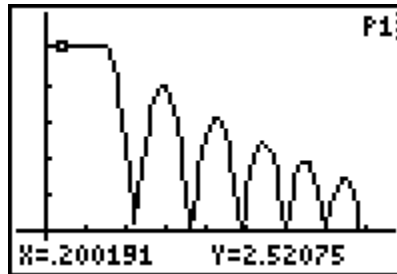
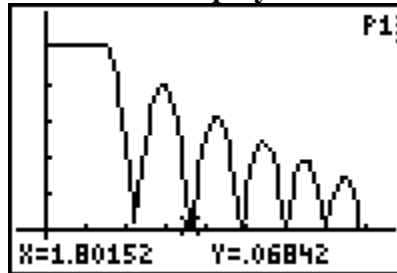


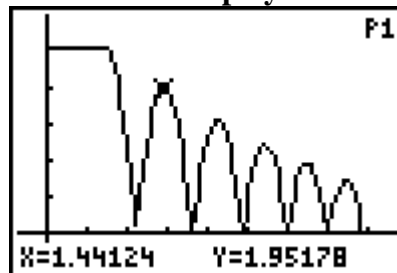
Activity 11: Curve Ball for TI Navigator



- A) Place your cursor close to the start of the second good bounce.
{Collect the cursor locations and display. Discuss.}



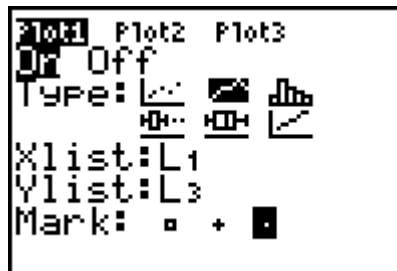
- B) Place your cursor close to vertex of the first complete parabola.
{Collect the cursor locations and display. Discuss.}



Question 2:

Set up the plot as shown below and press **[ZOOM] [9]**. Give the best-fit function for the {1st, 2nd, 3rd, 4th, 5th} bounce in the form of $y = A(x - H)^2 + K$.

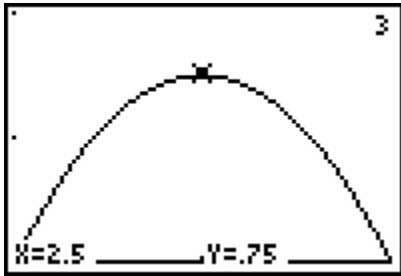
{Collect the answers and graph them with the BubleBaby for checking}



Activity 11: Curve Ball for TI Navigator

Question 3:

Given the following Bounce, identify the best Quadratic Equation to fit the parabola.

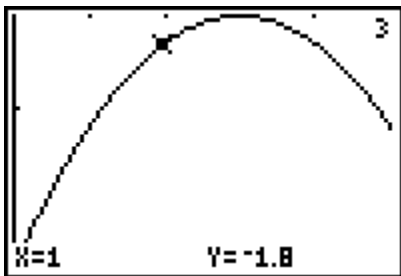


- A) $y = 3(x + 2.5)^2 + 0.75$
- B) $y = -3(x - 2.5)^2 - 0.75$
- C) $y = -3(x - 2.5)^2 + 0.75$
- D) $y = 2.5(x - 3)^2 + 0.75$

{ Ans: C }

Question 4:

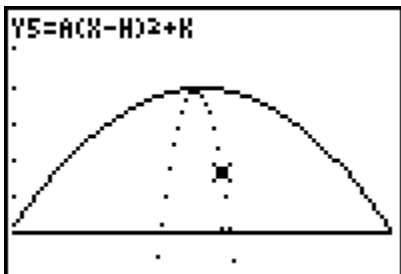
Is A, in $y = A(x - H)^2 + K$, for the following graph Positive or Negative?



{ Ans: Negative }

Question 5:

How would you adjust the quadratic equation, $y = A(x - H)^2 + K$ shown with the (...) line to fit the data from the bounce?



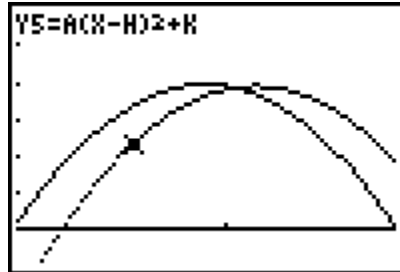
- 1) Increase A.
- 2) Decrease A
- 3) Leave A alone

{ Ans. = Since A is negative, 1) Increase A }

Activity 11: Curve Ball for TI Navigator

Question 6:

If $y = -4(x - 7) + 5$ and you miss the data from the bounce with this function as shown, which variable would you adjust to get a better model? A, X, H, Y, or K?



{Ans. = H}

Question 7:

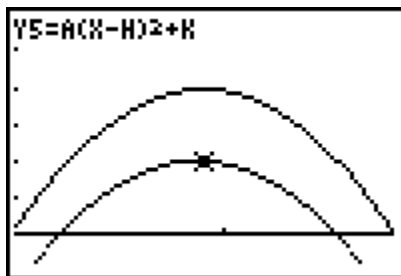
What are the units of H and K for this experiment?

- A) Seconds for H and Feet for K.
- B) Minutes for H and Meters for K.
- C) Meters for H and Seconds for K.
- D) Feet for H and Seconds for K.
- E) Seconds for H and Meters for K.

{Ans. = E}

Question 8:

Given the following guess for the model to represent the bounce shown, what would you adjust next in the quadratic $y = A(x - H)^2 + K$ to better fit the data?



- 1) Increase A.
- 2) Decrease A.
- 3) Increase H.
- 4) Decrease H.
- 5) Increase K.
- 6) Decrease K.

{Ans.= 5)Increase K.}