Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Per\_\_\_\_\_\_\_Due date\_\_\_\_\_\_\_\_\_

Writing About Math - The Volume of a Box

**An open box is made by cutting squares from the corners of a piece of paper that measures 8 in x 11 in and then folding up the resulting tabs. Each group will construct a box with a given value of x cut out of each corner. The goal is to find the group (and which value of x) creates the box with the largest volume.**

With your group you should consider the following:

What are the possible values of x that make sense in the problem?

What would an equation for the volume of the box in terms of x (that means use only x’s in your equation).

Fill in the table on the SmartBoard with your group’s volume.

What value of x produces the maximum volume?

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**Your Assignment - The Fruit Box Problem**

**Work the Fruit Box Problem on the sheet provided.**

**Write a typed one paragraph summary of your procedures and findings using the P.E.A.R. model.**  P = Point (Assertion or Claim), E = Evidence (Data, facts), A = Analysis (how?, why?),

R = Reinforce (conclusion).

 Be sure to include:

* + The domain of the problem written in interval notation
	+ An equation for the volume of the box in terms of x
	+ A table of your findings
	+ The maximum volume and x value that determines it

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Per\_\_\_\_\_\_\_Due date\_\_\_\_\_\_\_\_\_

Grading Rubric for Writing About Math Assignment

 **Grammar and conceptual understanding (10 points)** \_\_\_\_\_\_

1. The paper is type written
2. The paper is grammatically correct.
3. The paper is conceptually correct.
4. P.E.A.R. writing model is used.

**Mathematical Manipulations (10 points)**  \_\_\_\_\_\_

1. The volume equation is correct.
2. There is a table of values (minimum of ½ inch increments).
3. The entries in the table of values are correct.
4. The maximum x value is correct.

**Domain of this problem (5 points)**  \_\_\_\_\_\_

1. The interval values are correct.
2. The interval notation is correct.

Total Score \_\_\_\_\_\_/25