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

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

Writing About Math Assignment - The Volume of a Box

**An open box is made by cutting squares from the corners of a piece of cardboard that measures 20 in x 25 in and then folding up the resulting tabs. The edge of each cut out square is x inches.**

What is the domain of the problem? (What are the possible values of x that make sense in the problem?) Write your answer in interval notation.

Write an equation for the volume of the box in terms of x.

**You want to create a box that has as much volume as possible. Try several values of x to find the size of the square that should be cut from the corners to produce a box that has a maximum volume.**

Make a table which shows the values you chose and their resulting volumes. What value of x produces the maximum volume?

**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).

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Grading Rubric for Writing About Math Assignment

 **Grammar and conceptual understanding (4 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 (4 points)**  \_\_\_\_\_\_

1. The volume equation is correct.
2. There is a table of values.
3. The entries in the table of values are correct.
4. The maximum x value is correct.

**Domain of this problem (2 points)**  \_\_\_\_\_\_

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

Total Score \_\_\_\_\_\_/10