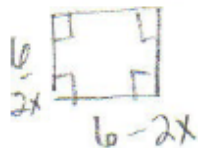


Based on the amount of time spent in the analysis category inside and outside the classroom, it was not surprising that the students did well in this category on the final exam. The more time focused on this category versus the application problems may have affected the results. Many of the analysis questions on the final required an initial creation of a function, but the algebra was quite easy once the function was created. Here is a student response to an analysis question on the final:

17. An open box is to be made from a square sheet of tin measuring 6 inches  $\times$  6 inches by cutting out a square of side  $x$  inches from each corner of the sheet and folding up the four resulting flaps. To maximize the volume of the box,  $x$  should be

$$V = (6 - 2x)^2 x$$



max (1, 16) (A)  $\frac{1}{2}$  (B) 1 (C) 2 (D) 3 (E) None of the above

Once the volume function was attained, it appears that the student graphically found the correct solution.