**Algebra 2**

**Common Core**

**Day 5**

Objective: To model a geometric relationship through mathematics.

Dimensions:

Directions:

1. Read problems 53 and 54 on page 26.

2. Cut the graph paper so you have the dimensions listed above.

3. Cut a square ….it MUST be the same amount cut from each corner. This is your height. So if you cut a 2 by 2 square out, then your height is 2.

4. Fold up the sides to form an open box.

5. Find the volume of this box by multiplying the length times the width times the height.

6. Record your initial input, your height, to your final output, your volume.

7. Repeat steps 2 through 5 and put your results in a table, like the one shown below for 4 different sized boxes:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Input | height | length | width | Output (Volume) |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

8. Now do problems 55a, 55b, 56a (what are the possible values for the height?), 56b (what are the possible values for the volume?), 57 and 58 (the poster that describes today’s activity).