



7TH GRADE TI-73 ACTIVITY 31: SQUARES INSIDE

ACTIVITY OVERVIEW:

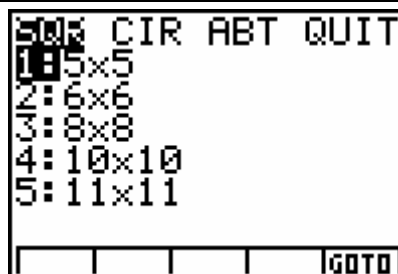
In this activity we will

- Use the Geoboard application to develop understanding of area
- Develop strategies for seeing area in drawings

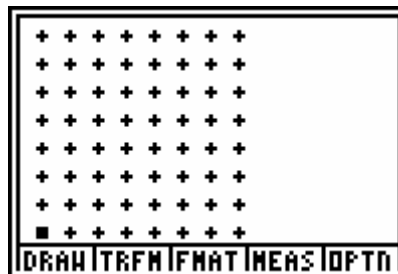


Area measures the square units inside a figure. What does this mean? You will use the Geoboard application on your TI-73 to help you better understand this concept.

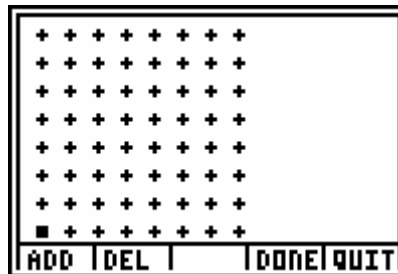
First, press your **[APPS]** key and select Geoboard by arrowing to Geoboard and pressing **[ENTER]**. Press **[ENTER]** again to reach the screen on the right.



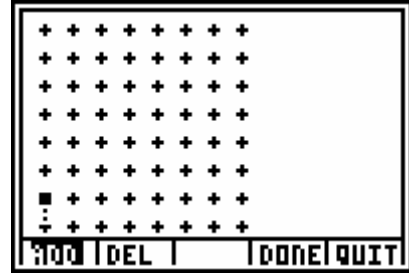
The basic menu items on the top allow us to work with square grids or circles. Arrow down to 3: 8X8 and press the softkey below GOTO. You should see the screen on the right.



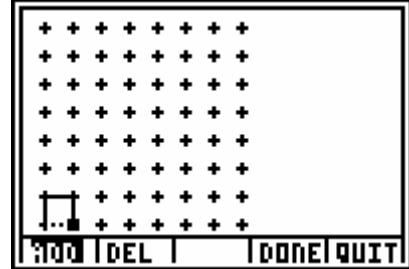
First we will draw a square with an area of 1 square unit. Press the DRAW softkey. You will now see a new menu that allows you to add vertices to create your figure. Start in the lower left and press the key below the ADD softkey.



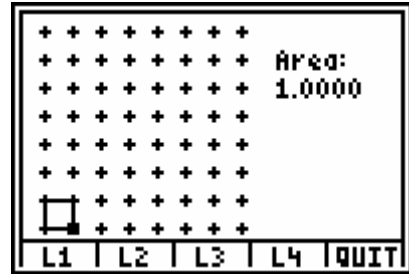
Use the arrow key () to move up one unit and press ADD again. You will notice when you move up one unit that there is a flashing dotted line. This indicates what will draw when you select add.



Continue around your square until you have added all four vertices, with side lengths of 1. Press the key below the **DONE** softkey when you are finished. Then press the key below the **QUIT** softkey.



Now you can measure your figure. Press the key below the MEAS softkey. and arrow to **2: AREA**. Then press **ENTER**. The area is 1 square unit.

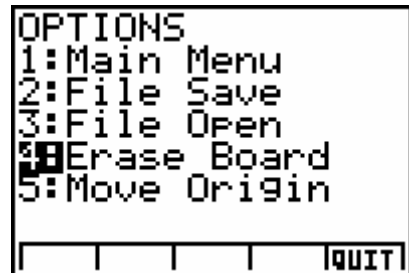


Press the key below the **QUIT** softkey. Now, repeat the steps of drawing the square and measuring the area. Do this for squares of side lengths 2 through 7. You can begin from the original corner. Your new square will have the original square inside it. Count all the squares inside each new one before you use the application to compute the area.

AREAS

2X2 _____ sq units
 3X3 _____ sq units
 4X4 _____ sq units
 5X5 _____ sq units
 6X6 _____ sq units
 7X7 _____ sq units

If you want to start a new problem, press the key below the **QUIT** softkey and select **4: ERASE BOARD**. You can then start a new problem.



EXTENSION

Instead of drawing familiar shapes, draw shapes that have irregular shapes. Attempt to determine the area before you use the area measurement tool. Make shapes and trade them with a partner to test each other.