Area on the Geoboard

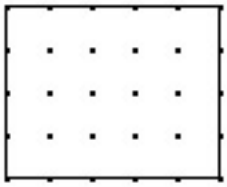
The geoboard is a board that has pegs forming a square grid. They are commercially available (for about $6). You can form geometric shapes using rubber bands. For these activities the square that is between four adjacent pegs on the geoboard will be considered of area 1 unit square. You can also use a grid and a ruler to trace the figures.

Activity 1

Construct one unit square on the geoboard. Construct a rectangle that contains the unit square. *How many unit squares could you fit in your rectangle?*

Activity 2

1) Construct a rectangle on the geoboard that has a base of five units and a height of four units.

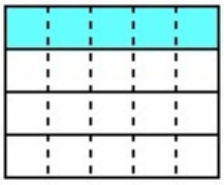


Count the number of unit squares contained in the rectangle.

2) Use rubber bands to divide the rectangle into rows.

- *How many rows do you have?*
- *How many unit squares in each row?*
- *How can you use this to find the total numbers of unit squares in the rectangle?*

Notice that the number of squares per row is given by the length of the base of the rectangle, and that the number of rows is given by its width. Relate this to the formula length x width that is used to compute the area of a rectangle.



3) Divide the five by four rectangle into columns.

- *How many columns?*
- *How many squares in each column?*
- *Describe an alternative way to find the total number of squares in the rectangle.*

Notice that the number of columns is given by the length of the base, and the number of squares in each column is given by the width of the rectangle