

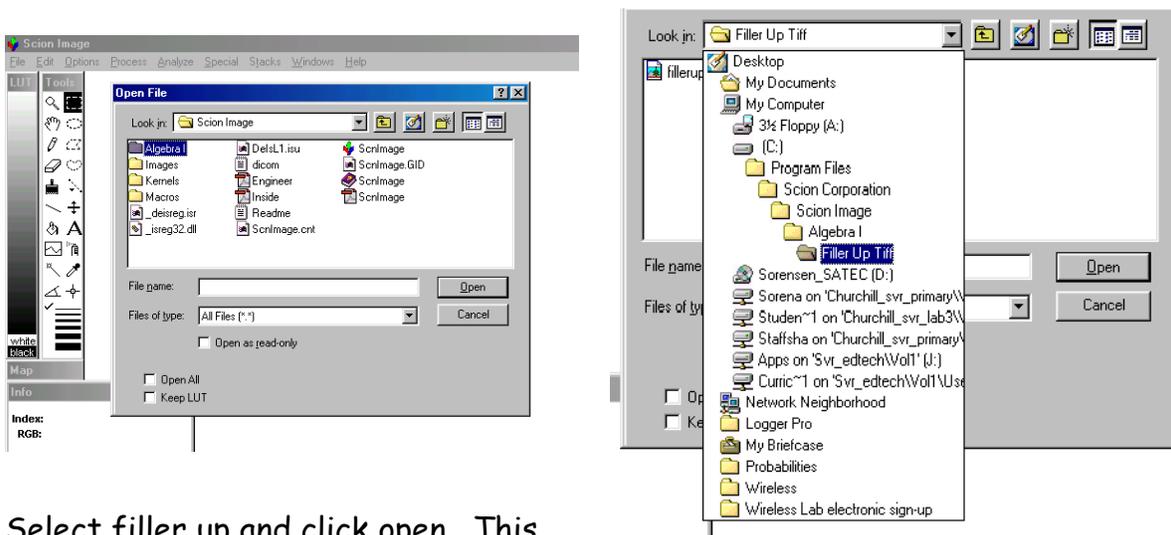
Basic Skills for Scion Image software.

Scion image is a program that will allow you among many other things to measure different things from still images or different kinds of files (stacks).

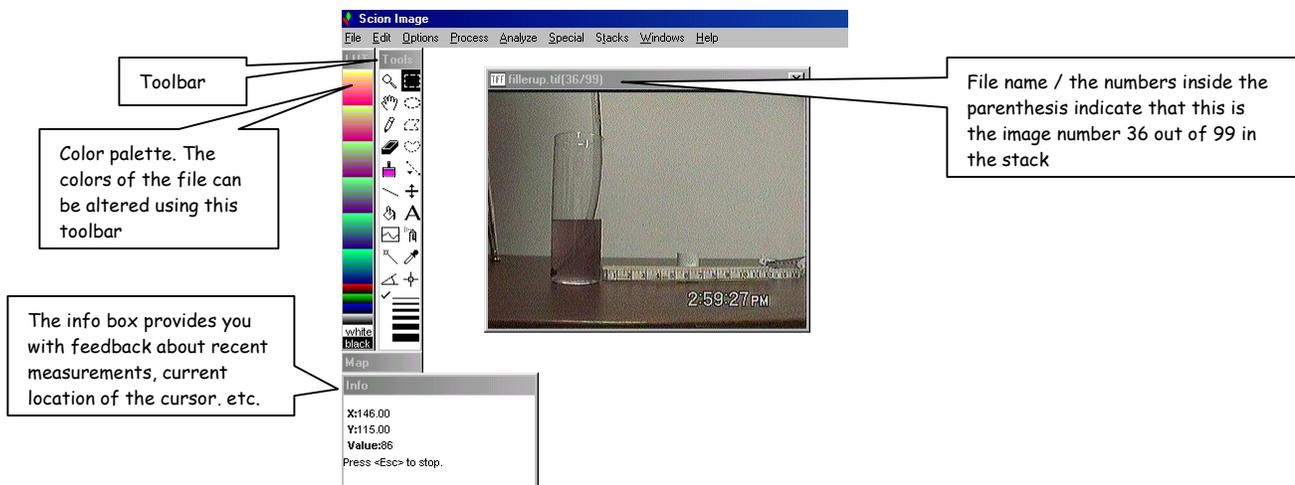
The image has to be opened through Scion image rather than opening the image and then opening scion image.

Suppose we want to take some measurements from a stack of images, (a TIFF stack) like filler up.

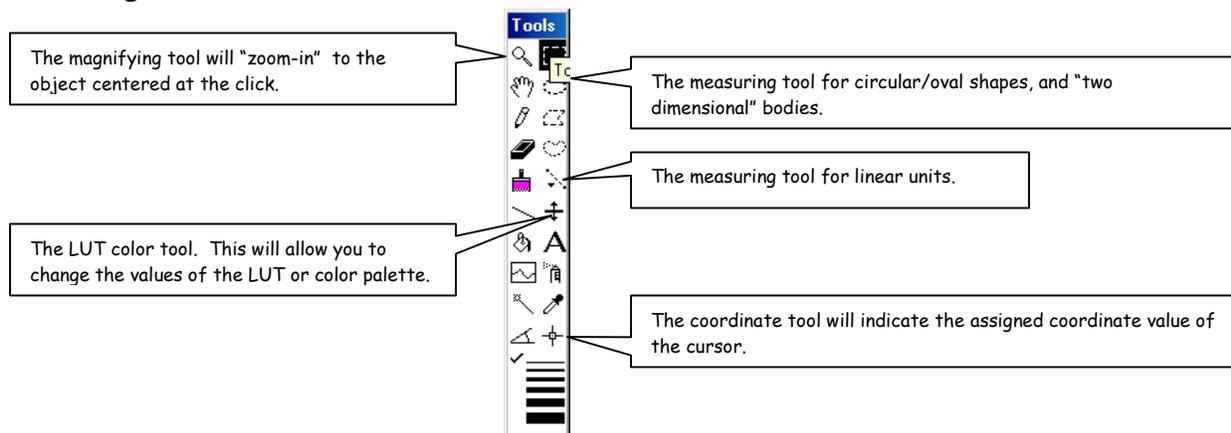
1. Launch Scion Image
2. Click on File, Open, and select the location of the file as well as the file to be opened.



3. Select filler up and click open. This should open a stack of individual pictures.



Some of the tools that are used consistently in the Algebra curriculum are the following :

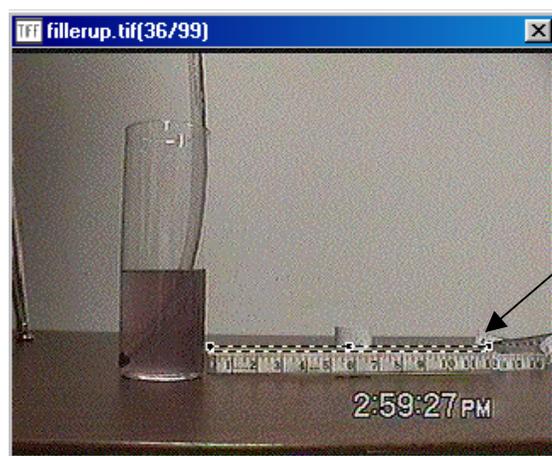


There are some other tools in scion image that can be used but normally not used in math that we can discuss later.

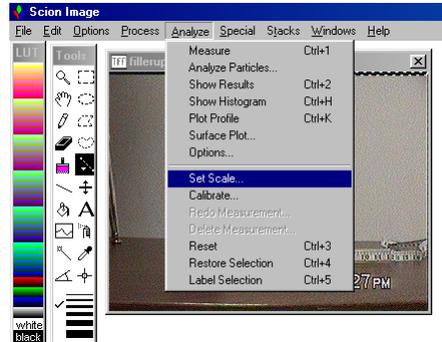
Setting the scale.

Scion image will automatically convert measurements from units measured in pixels (a pixel is one of the "dots" that you see in your screen which projects the image) into any other standard unit of measurement such as inches, meters, etc. In order to do so we need to set the scale so the program can convert the measurements from pixels to our preferred choice of units. To set the scale you need to use the measuring tool and "highlight" or "underline" a known distance so the program can convert the number of pixels to our units.

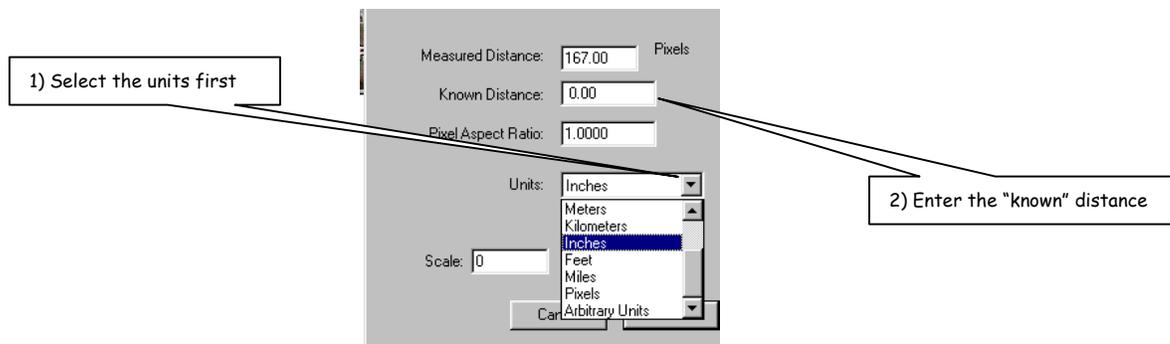
1. Select the measuring tool from the toolbar  , right click and drag across a known distance in the image to be measured. (notice the dotted line across the ruler in the picture).



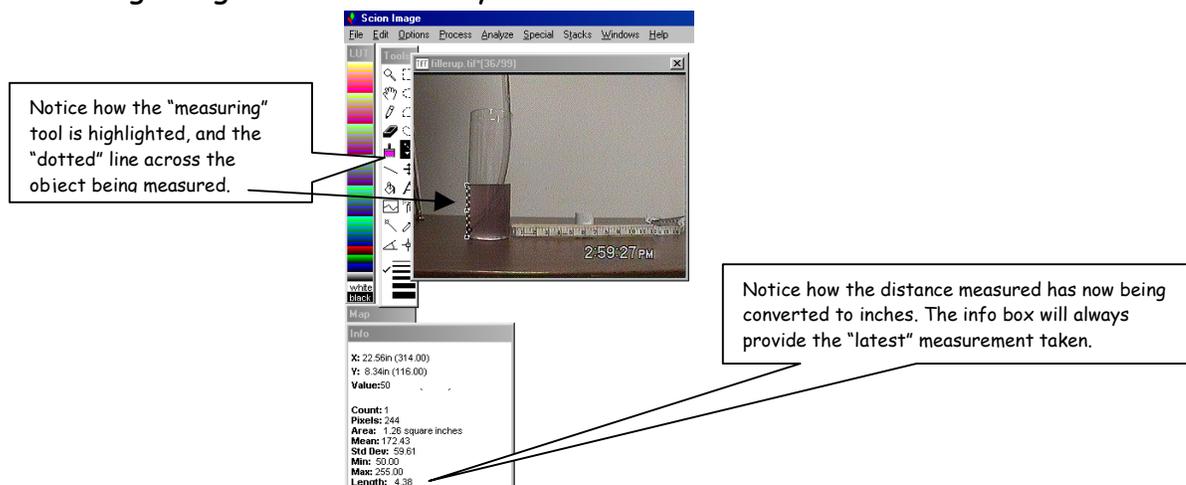
- Click on Analyze and select Set the scale from the menu.



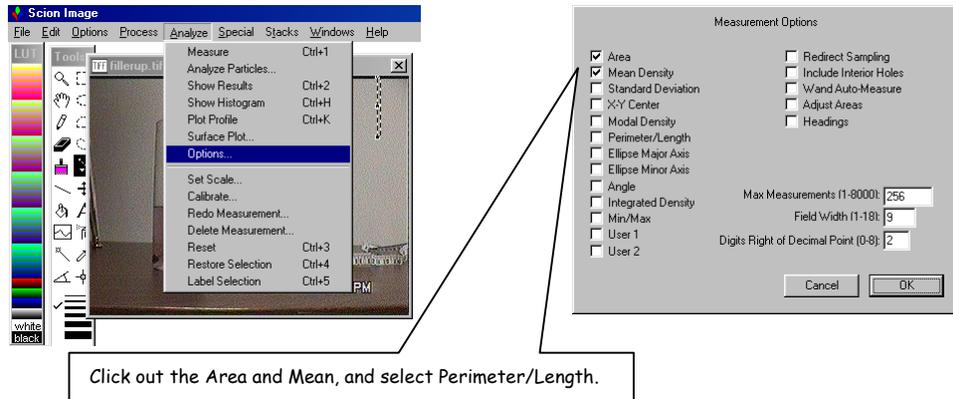
- This should bring the following screen where you will indicate the known distance measured with the measuring tool and provide the units of conversion. (HINT: before entering the known distance be sure to change the units and then enter the known distance)



- Now the program is ready to "collect measurements" that are read in pixels and convert them to inches.
- The next time you use the measurement tool and "measure" a distance it will be saved into the memory of Scion image and it will also be shown in the **Info** box
- To record a measurement, you need to "highlight" the distance to be measured, click on **Analyze** and select **Measure**. This will record the reading using the scale initially set.



7. As mentioned before, a series of measurements that are taken are automatically recorded in the memory of the program. The measurements can be recalled by clicking on **Analyze** (from the top menu) and selecting "**Show results**".
8. By default, the program is set to always include *Area* and *Mean* in the "*Show results*" box. These options can be changed initially before taking any measurements by clicking on:
 - (1) **Analyze,**
 - (2) **select Options...**



After selecting these options are set, the "show results" will only show the measurements for the Length/Perimeter.

These measurements can be typed into the calculator or in *Graphical Analysis* for further analysis.

Recording measurements from Scion image into *Graphical Analysis*.

The measurements can be "copied" and "pasted" directly from Scion image into *Graphical Analysis* following these steps:

1. After the measurements are collected in Scion Image and are ready to be pasted into *Graphical Analysis*, click on **Edit** (from the top of the menu), and select **Copy Measurements...**
2. Launch *Graphical Analysis*, and click on the first cell of the column in which the measurements will be pasted.
3. Click on **Edit**, and select **Copy data**. This will automatically paste the data from Scion Image into *Graphical Analysis*.