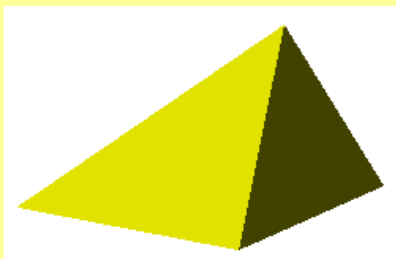


Creating an "Oblique Pyramid" (FabLab ModelMaker needs to be installed to replica this exercise)

What is an "Oblique Pyramid"?

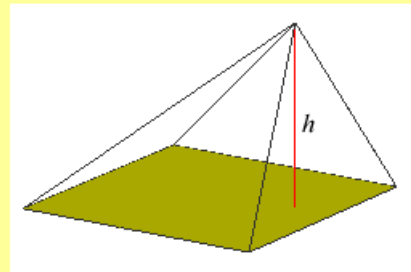
Oblique Pyramid

A pyramid with an apex that is not aligned above the center of the base.



Solid view: oblique pyramid with a square base

After starting the program click on the FILE tab on top:



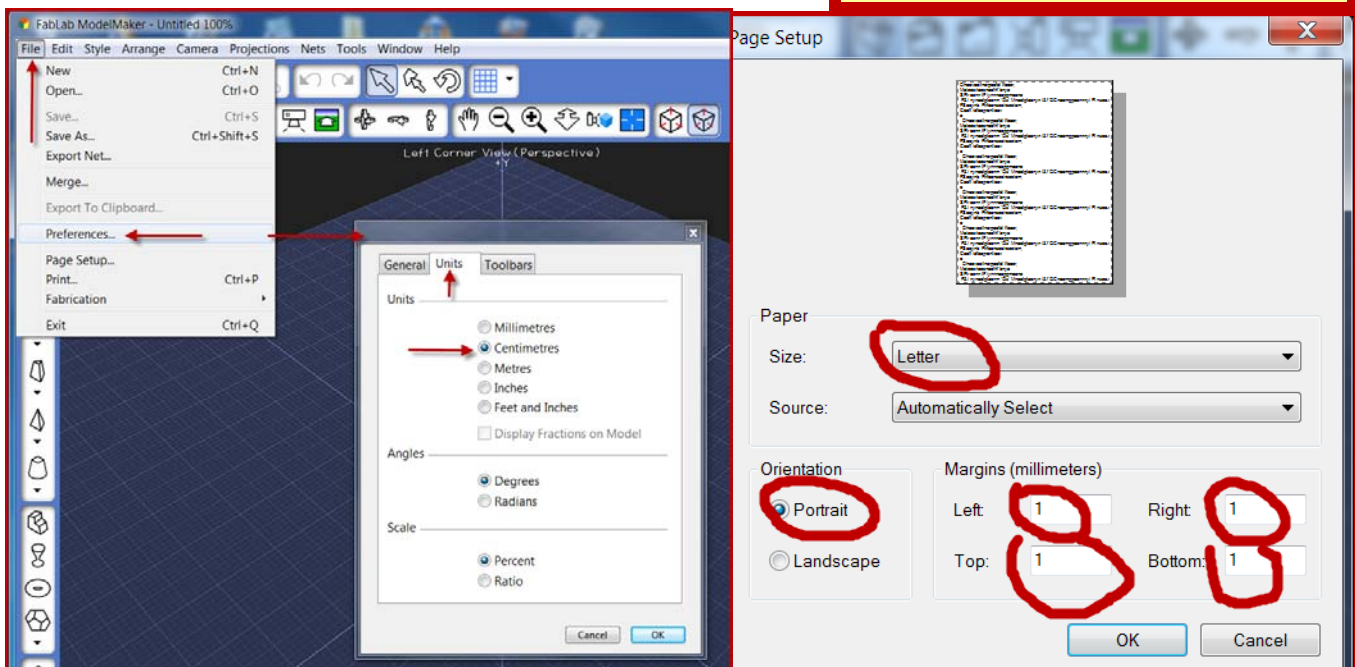
Frame view: oblique pyramid with a square base

- FILE and then click on
- PREFERENCES
- Click on UNIT and select METRIC
- Close Preferences and click on PAGE SETUP
- Set all four margins to "1", click on OK

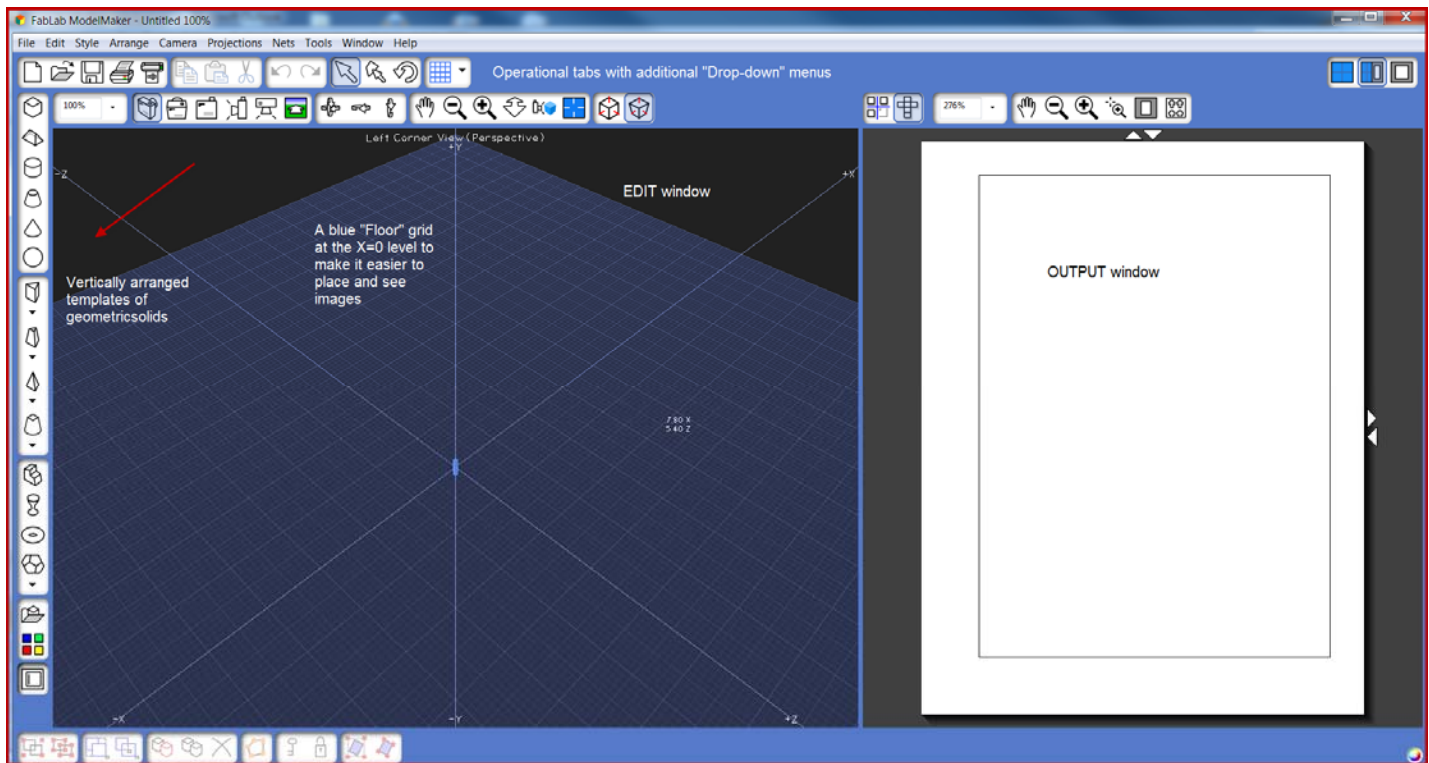
$$\text{Volume} = \frac{1}{3} Bh$$

h = height of the pyramid

B = area of the base

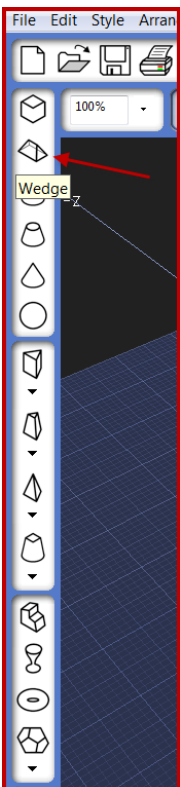
A screenshot of the FabLab ModelMaker software interface. The 'File' menu is open, showing options like 'New', 'Open', 'Save', and 'Preferences'. The 'Preferences' dialog is open, with the 'Units' tab selected. The 'Units' section has 'Centimetres' selected. The 'Page Setup' dialog is also open, showing 'Paper' settings. The 'Size' is set to 'Letter', 'Orientation' is 'Portrait', and all four margins (Left, Right, Top, Bottom) are set to '1'. Red circles highlight the 'Letter' size, 'Portrait' orientation, and the '1' margin values.

“Home Page” of FabLab ModelMaker



This page consists of:

- the EDIT screen in blue on the left side. All operations take place in this screen, such as adding or modifying shapes
- Rotating, zooming, changing camera views, adding colors / images / graphics, etc



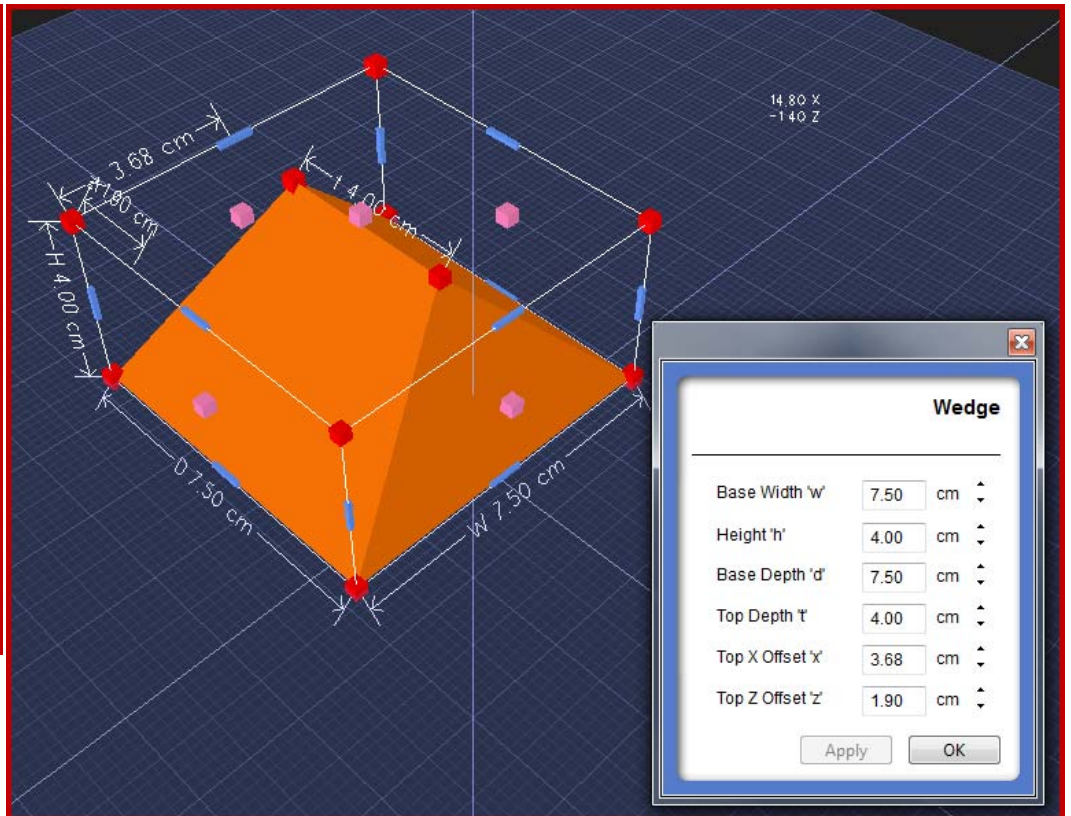
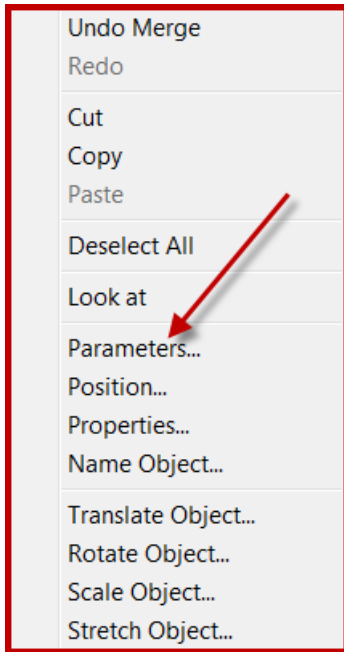
- The OUTPUT screen is for displaying the NETS, with glue tabs and fold lines; different folding options (Permutations); 3rd of 1st Angle Projections, etc.
- On the left side, vertically arrange, are over 50 templates of geometric solids that can be called upon and manipulated
- On the top are all the “operational” commands and tabs.

To create the Oblique Pyramid we will select the WEDGE template from the vertical template bar at the left:

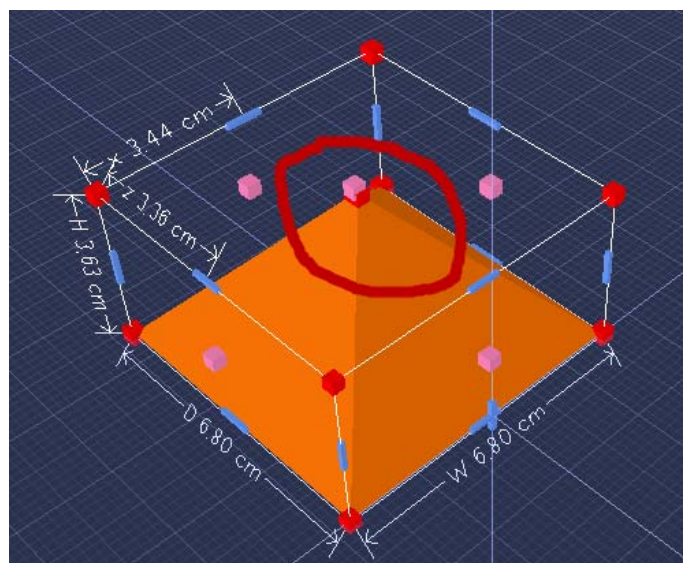
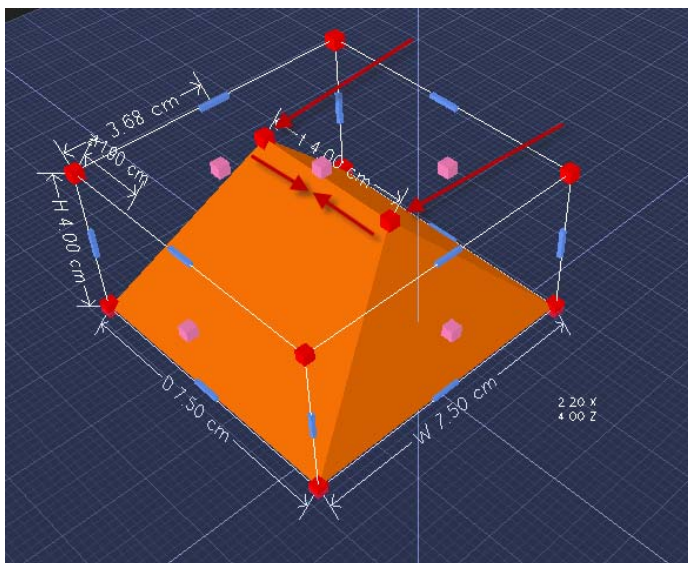
- Click on the WEDGE icon
- Move your cursor to the -2.00 position on the X-axis
- Without releasing the left mouse button move the cursor to the -2.00 position on the Y-axis
- Release the mouse button and move the cursor UP to the $+2.00$ position on the Y-axis
- You now have created a WEDGE
- For dimensioning see next frame

To build the Oblique Pyramid” you need to create a wedge of any size.

- Position you cursor inside the image of the wedge
- RIGHT CLICK to open a new drop-down window
- Select PARAMETERS as shown in the picture to the left
- You now have a new drop-down window next to the wedge)see below. Set dimensions as shown
- You can now see a number of colored ‘grab handles”
- Set the dimensions as seen in the picture to the right



- Click on one of the two RED grab handles as shown in the picture below.
- Do not release the left mouse button and move to the left until the two top red grab handles overlap and become one
- See the picture at the bottom right

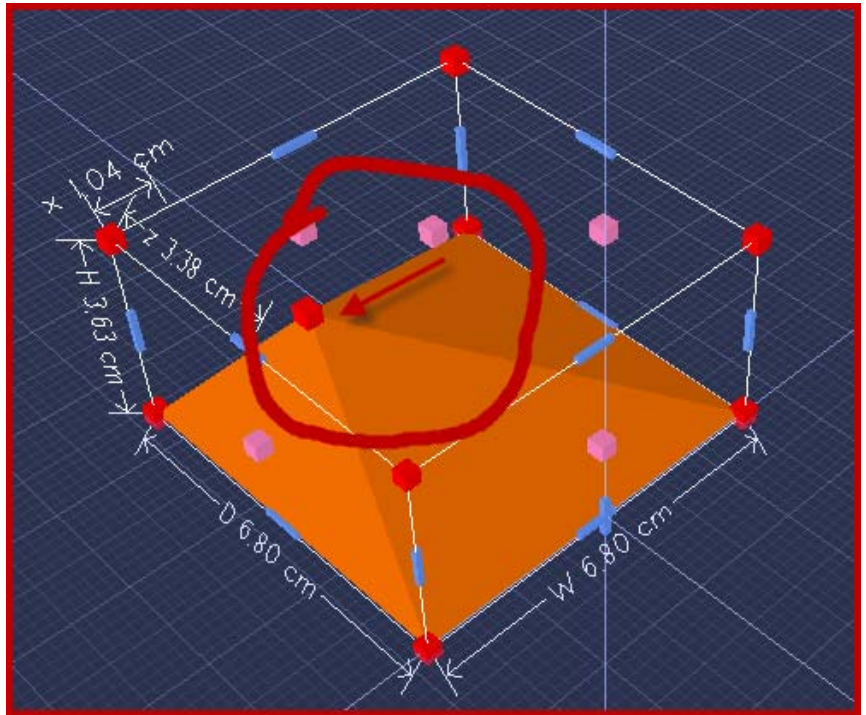
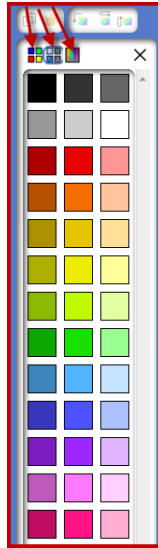
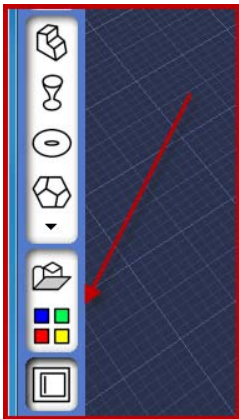


To make the new pyramid “oblique”

- Click on the unified red grab handle and move it the direction of the red arrow as indicated below
- You now have the “oblique” pyramid

To make the pyramid stand out a bit more,

- Click on the color palette located at the bottom left side of “the vertical “template” icons



- the entire palette with the choice of solid colors or a multitude of texture palettes.
- Click on a color square and drag it over one for the sides of the pyramid. Try to copy the design below.
- To rotate the image of the pyramid, click on the circular “rotate” icon at the top and select the direction of the rotation by click on one of the brown grab handles on the pyramid
- To color or place an image (e.g. a flag) on the bottom of the pyramid, click on “camera view at the top and select “bottom view”

