

1.0 Creating a Transformation

As an example, a second cube that is offset and rotated in the X and Y direction will be created from a cube centered at the origin.

Open the file **itransform**.

Click on **Update Plots**.

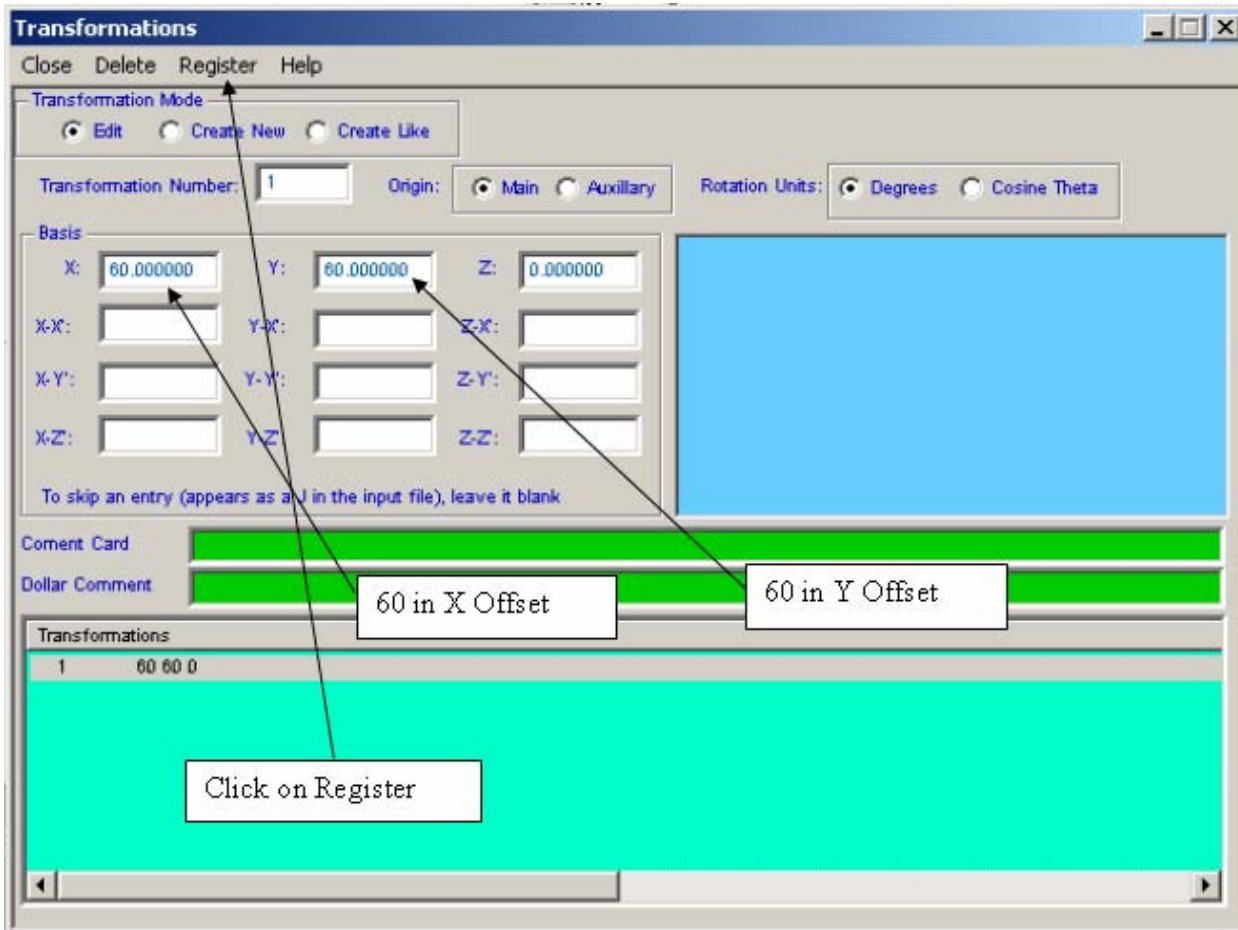


Figure 1-1 Create a Transformation with 60 cm offset in X and Y

Click on **Data** on the Main Menu and **Select Transformation**.

Type 60 in the X Offset and **60** in the Y Offset and **Click** on **Register**. The transformation appears as Transformation 1 in the list at the bottom of the Transformations Panel.

Click on **Cell** on the Main Menu to open the Cell panel.

Click on **Scan**.

Click in the cube centered at the origin.

Click on **Create Like** on the Cell Panel.

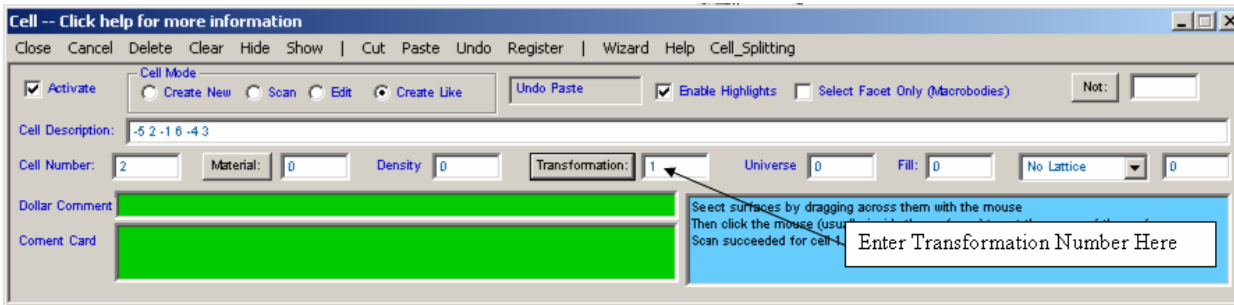


Figure 1-2 Create a Cell Using the Transformation

Type a **1** in the Transformation box on the Cell Panel for the transformation that was just created. Alternately, the user could click on the Transformations button and select the desired transformation from the list.

Click on **Register**.

Click on **Update Plots**.

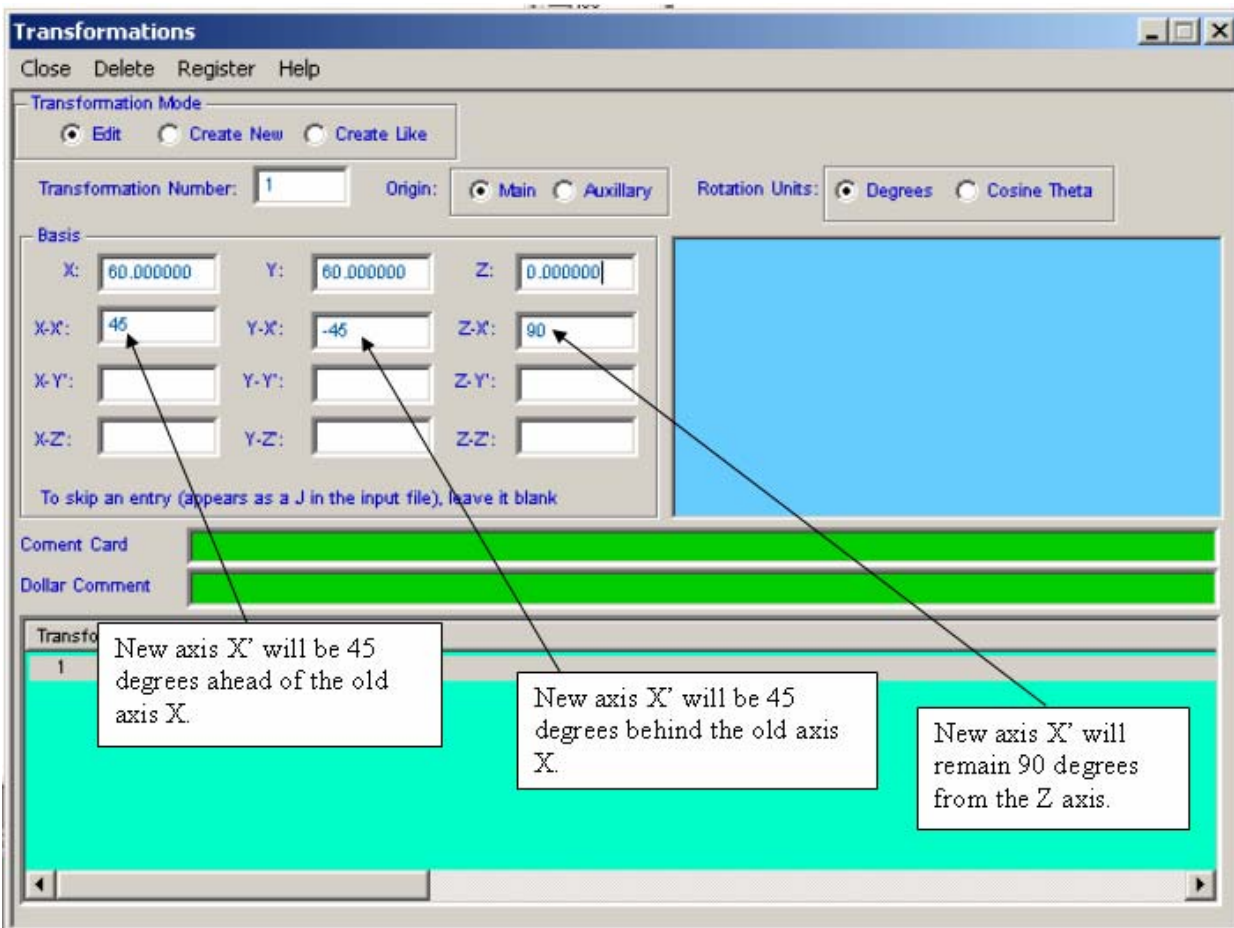
The result should look like *Error! Reference source not found.*

2.0 Modifying an Existing Transformation to include Rotation.

To add a 45 degree rotation about the Z axis, return to the Transformation window by **Clicking on Data...Transformation** if it is not currently displayed.

Click on **Transformation 1** in the bottom window.

Click on **Edit** on the menu of the Transformation Window.



To rotate about the Z axis, advance the X axis by 45 degrees, **Type 45 in the X-X' box.**

Advancing the X axis with respect to the original will mean that it will now be 45 degrees behind the original Y axis rather than 90 degrees behind it as it was in the start.

Type -45 (negative 45) in the Y-X' box.

The Z axis will not change nor will the angle between it and the modified X axis so it remains 90 degrees which is the default (identity) value.

Type 90 in the Z-X' box.

Click on Register.

Click on Update Plots on the Main Menu.

If the plot does not refresh correctly, **Click on Input** on the **Main Menu** to open the Input window and then click on **Save-Update** to refresh the memory and then **Click on Update Plots**.

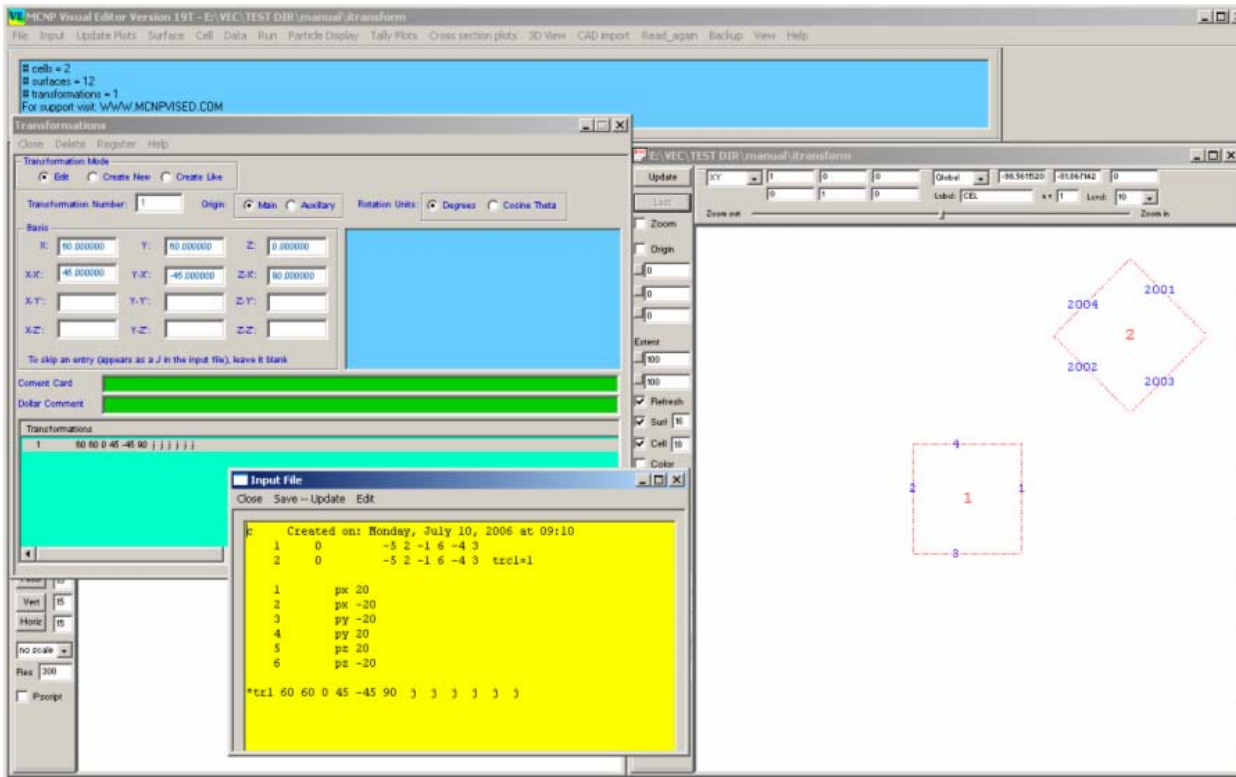


Figure 2-1 Cube with Offset and Rotation

Figure 2-1 shows the result.