



Transforming objects

Transforming includes moving, rotating, reflecting, scaling, and shearing objects. You can transform objects using the Transform panel, Object > Transform commands (clicking the Transform command in the Control panel), and specialized tools. You can also perform many types of transformations by utilizing the settings in the Properties panel or dragging the bounding box of a selection.



Sometimes you may want to repeat the same transformation several times, especially when you are copying objects. The Transform Again (Ctrl+D) command in the Object menu lets you repeat a move, scale, rotate, reflect, or shear operation as many times as you want, until you perform a different transform operation.

Move Panel

Double-click on the Selection tool or press the Enter key will open up the Move panel. Where you can specify how to transform the object, horizontally, vertically or changing the angel. Only transforming the selected object or transform the patterns inside the object as well. You can preview the transformation before clicking OK or Copy.

Transform panel overview

The Transform panel (Window>Transform) displays information about the location, size, and orientation of one or more selected objects. By typing new values, you can modify the selected objects, their pattern fills, or both. You can also change the transformation reference point and lock the object's proportions.

The Transform panel also include the Live Corners options.

All values in the panel refer to the bounding boxes of the objects except for the X and Y values, which refer to the selected reference point.

- Using the Control Panel
- Using the Selection tool
- Using the Transform panel
- Using Object>Transform

Tips: Enter a value in the X or/and Y fields, hold down the Alt key and hit Enter, will move and make a duplication simultaneously.

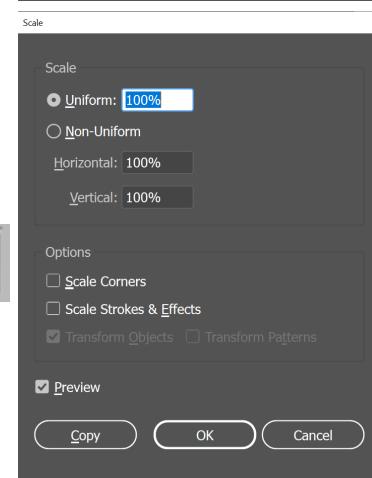
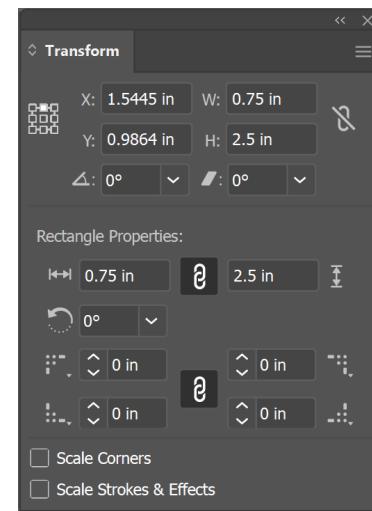
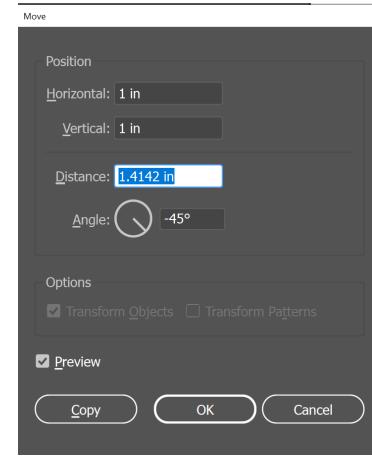
Scaling

To resize (rescale) any object, first select the object. Click on any one of the four corners to scale. If you place your cursor close to any corner, it will turn into a curved double arrow. Which allow you to rotate the selected subject. Hold on to the Shift key will allow you to rotate 45°. If the bounding box is not displayed, choose View>Show Bounding Box.



The disadvantage of using the Bounding Box to do Scaling is that it does not give you a very precise percentage. Use the Scale panel (S) to resize your object to an exact percentage. Double-click on the icon to open the Scale dialog box.

You don't have to click on any anchor point to rescale an object, you can click and drag the mouse anywhere on the artboard.





For example:

1. With the object selected, double-click on the Scale Tool and enter 98% if you are scaling down, or 102% if you are scaling up.
2. Press Ctrl+D to repeat the transformation, every time you press this short cut, the object will scale by 2% smaller or bigger.

You can also scale multiple objects by first selecting the objects, a single bounding box will appear. You can use the bounding box to scale or use the Scale Tool.

Rotating

Select an object, with the bounding box displayed (Object>Show Bounding Box), hover over a corner of an object, the Selection tool cursor turns into a double-headed, curved arrow. Click and rotate the object.

To rotate an object with more precision, select an object, double-click on the Rotate Tool, in the Rotate dialog, enter a value in the Angle area of the Rotate dialog to set the degree of rotation.

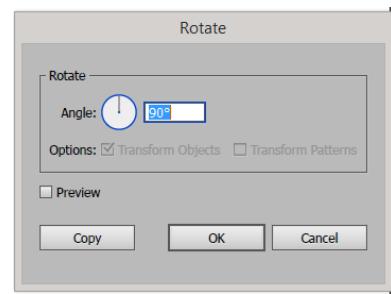
You can select any anchor point as your center of rotation:

1. Select the object (or objects) to be rotated.
2. Click on the Rotate tool.
3. Click to define the rotation center point. (The center point can be anywhere in the document).
4. Click and drag anywhere in the document to rotate the object around the selected point.



To rotate and copy an object a specific number of times so you end up with even angles between objects, let Illustrator figure it out for you.

1. Select an object (like an arrow).
2. Select the Rotate tool. Press-and-hold the Alt key, and click anywhere away from the bottom of the object. (e.g. one inch away from the bottom of the object)
3. In the Rotate dialog, enter 360/8 (or any number which is a multiple of 2). Then click Copy. The object will be copied and rotated the correct number of degrees.
4. Press Ctrl+D several times to complete the circle

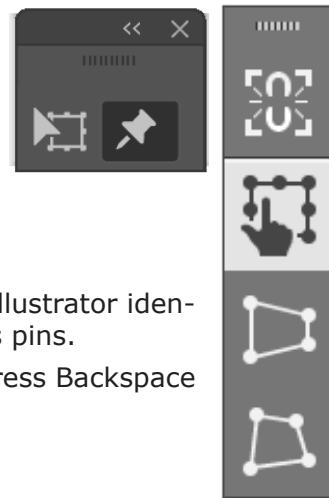


Puppet Warp and Free Transform Tools

How to transform artwork using the Puppet Warp and Free Transform tools

If you cannot find the Puppet Wrap or Free Transform Tools, go to Window > Toolbars and select Advanced.

The Puppet Warp tool lets you twist and distort parts of your artwork. With it, you can add, move, and rotate pins to seamlessly transform your artwork into different variations.



Add pins with the Puppet Warp tool

- Pins can hold artwork in place or be moved and rotated to transform artwork.
- With artwork selected, select the Puppet Warp tool in the Toolbar. By default, Illustrator identifies suitable areas in which to transform your artwork and automatically adds pins.
- To add more pins, click the artwork. To remove pins, click to select a pin and press Backspace or Delete.

The Free Transform tool lets you distort artwork freely.

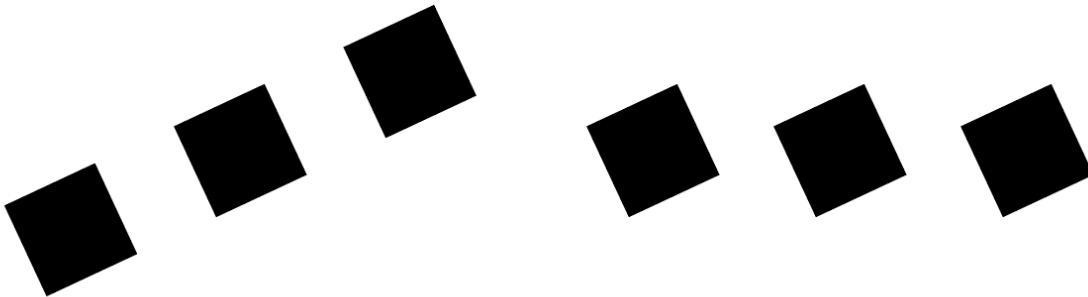
With the Free Transform tool selected, drag a point on the bounding box to freely transform the artwork. Depending on the transform option set in the Free Transform widget, you can manipulate the artwork in different ways.



Transforming Multiple Objects Simultaneously

When you select several objects, Illustrator performs all transformations based on a single origin point. This behavior is fine for some needs, but sometimes you want to have transformations applied to a range of objects, and you want those transformations to be applied using individual origin points. For example, if you've selected several shapes and you plan to rotate all of them by 45 degrees, you probably want each shape to rotate around its own center.

With the Transform Each function, you can rotate each object around its own individual origin point.



With all 3 squares selected, using
Rotate to rotate 25°

With all 3 squares selected, using
Transform Each to rotate 25°

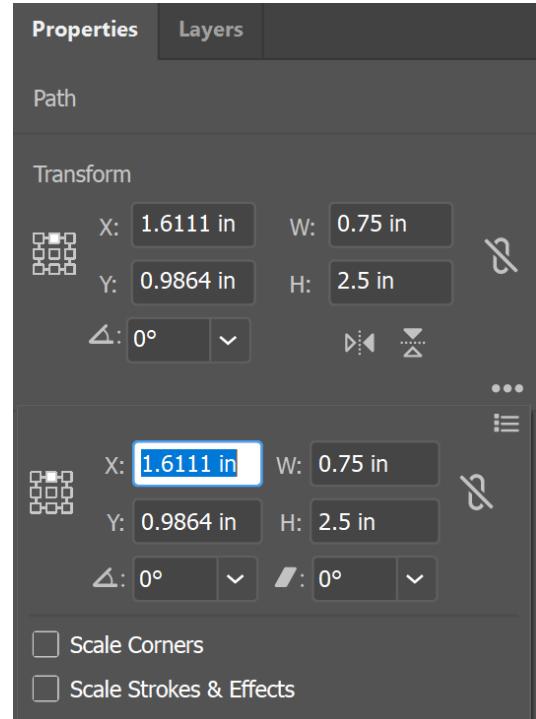
The Transform Each function was designed specifically for applying transformations across a range of objects, where each object maintains its own origin point. Select a range of objects—even grouped objects—and choose Object > Transform > Transform Each to open the Transform Each dialog box. Specify Scale, Move, Rotate, and Reflect settings as desired. (Selecting the Preview checkbox allows you to see the effects of the transformation before you apply it.)

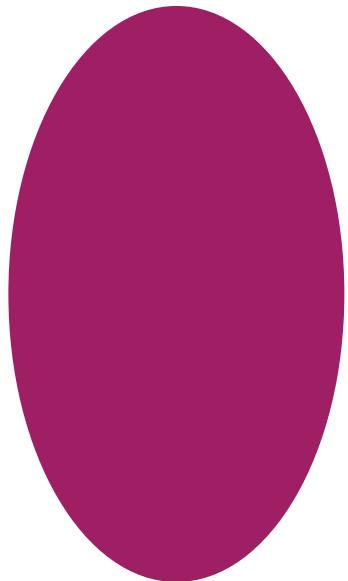
Even though the Transform Each function was designed for applying transformations to multiple objects, it's a great tool to use on single objects; the dialog box allows you to specify multiple transformations in one step.

Transforming Objects in Properties Panel

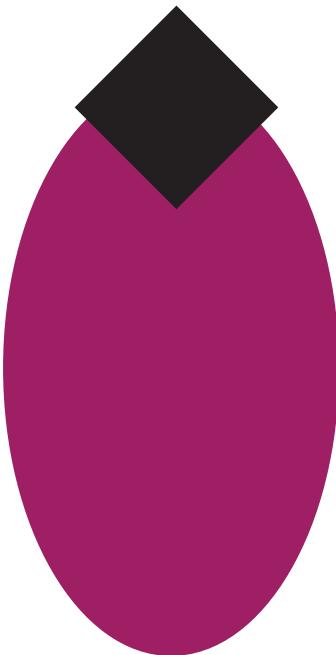
In Illustrator, you can do some basic transformation to an object, using the Properties panel.

1. With an object or objects selected
2. In the Properties panel, you can change the values in the X, Y, W and H fields.
3. You can also change the angle of the object by entering a value in the Rotation field.
4. You can also flip the selected object horizontally or vertically by clicking on either of the flip icons.
5. Click on the ellipses (3 dots) will open up more options.
6. You can skew any selected object
7. Activate the Scale Corners or Scale Strokes & Effects features.

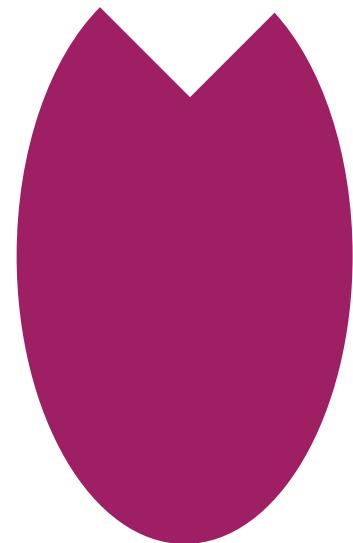




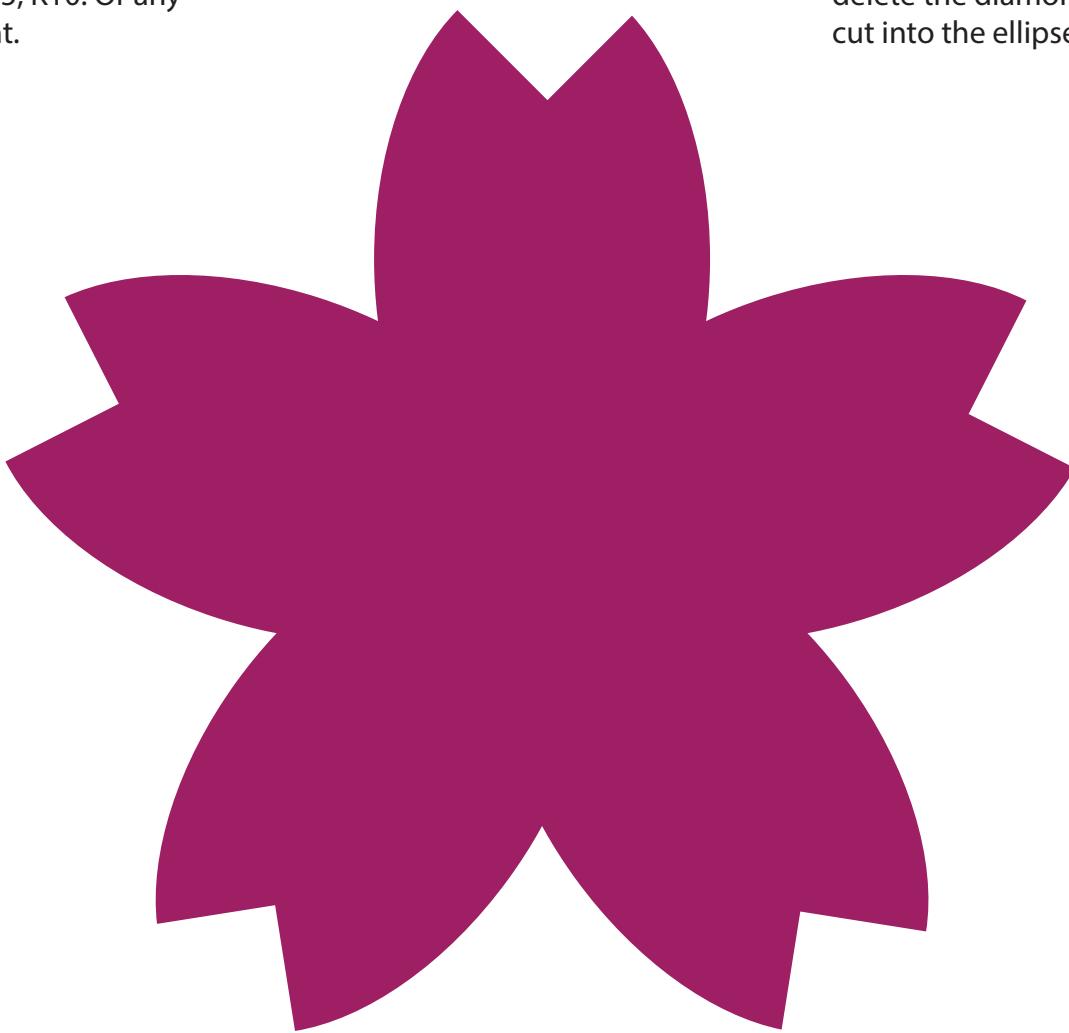
Draw an ellipse, 1.75" x3"
Fill with CMYK color:
C35, M100, Y35, K10. Or any
color you want.



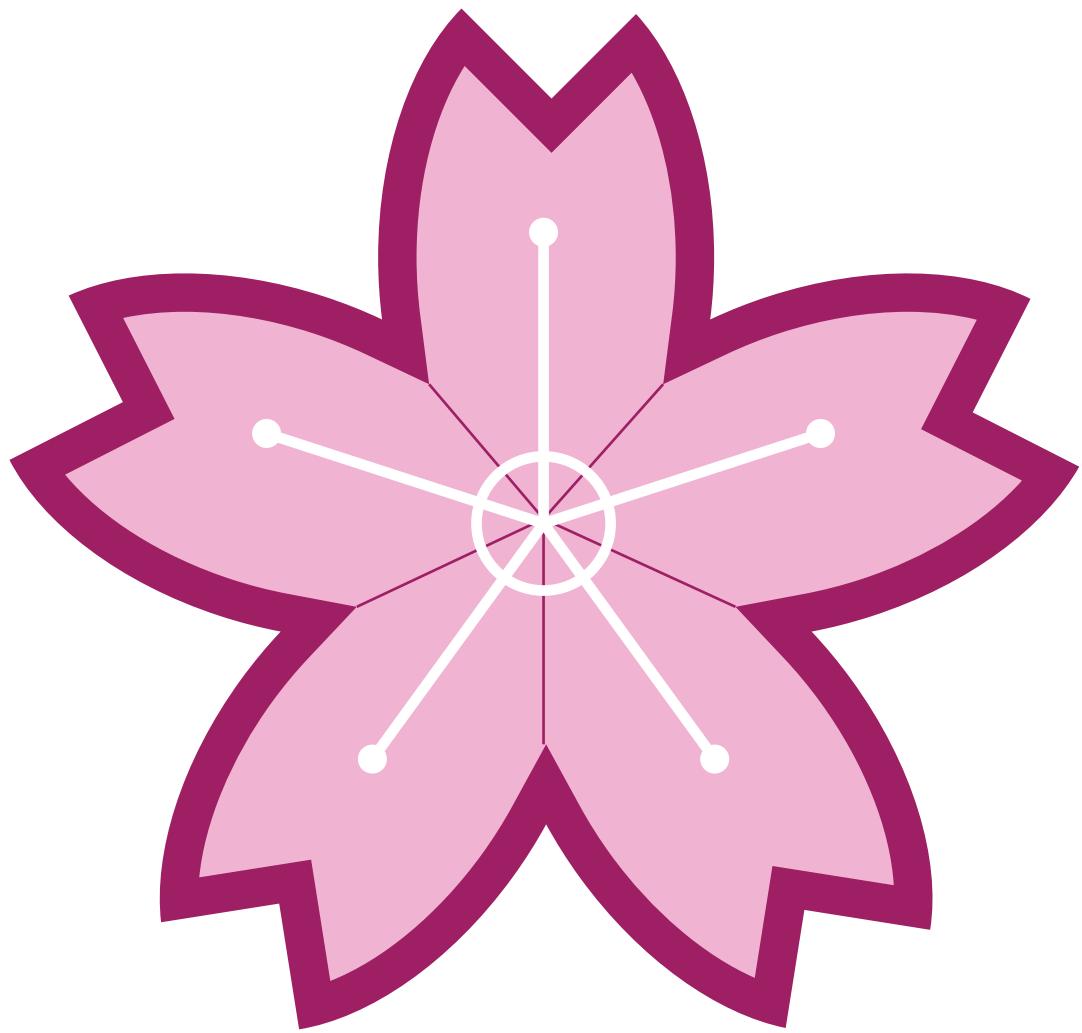
Draw a square of 0.75", rotate it 45°
and place it on top of the ellipse.



Select the Shape Builder tool,
hold down the Alt key to
delete the diamond shape and
cut into the ellipse.



Select the shape, select the Rotate tool, hold down Alt key and click the bottom node of the shape,
in the Rotation dialog box, type in 360/5 and select Copy. Use Ctrl+D to duplicate 3 more copies.



Select all five shapes, with the Pathfinder panel opened, choose Unite to merge all shapes.

Or, you can use the Shape Builder tool to combine them together.

Go to Object > Path > Offset Path, in the dialog box, give a -0.2" offset.

Assign a lighter color to the new offset shape.

Draw some patterns over the petals, to make it look like a sukura flower.

