

# Lesson 1

## Illustrator Basics

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## What Is Illustrator?

Adobe Illustrator is the industry standard software for creating vector graphics. The main difference between Illustrator and Photoshop is that Illustrator is **vector-based**, meaning that its graphics are created based on mathematical statements. This allows the images to be scaled to any size without losing any of their quality, as opposed to pixel-based images in Photoshop, which tend to become blurry or “pixelated” when resized too much. In this lesson, we’ll go over the main tools and functions in Illustrator, and go more in depth into the tools throughout the rest of the semester!

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## Workspace

**Artboard:** The area of the document that will print.

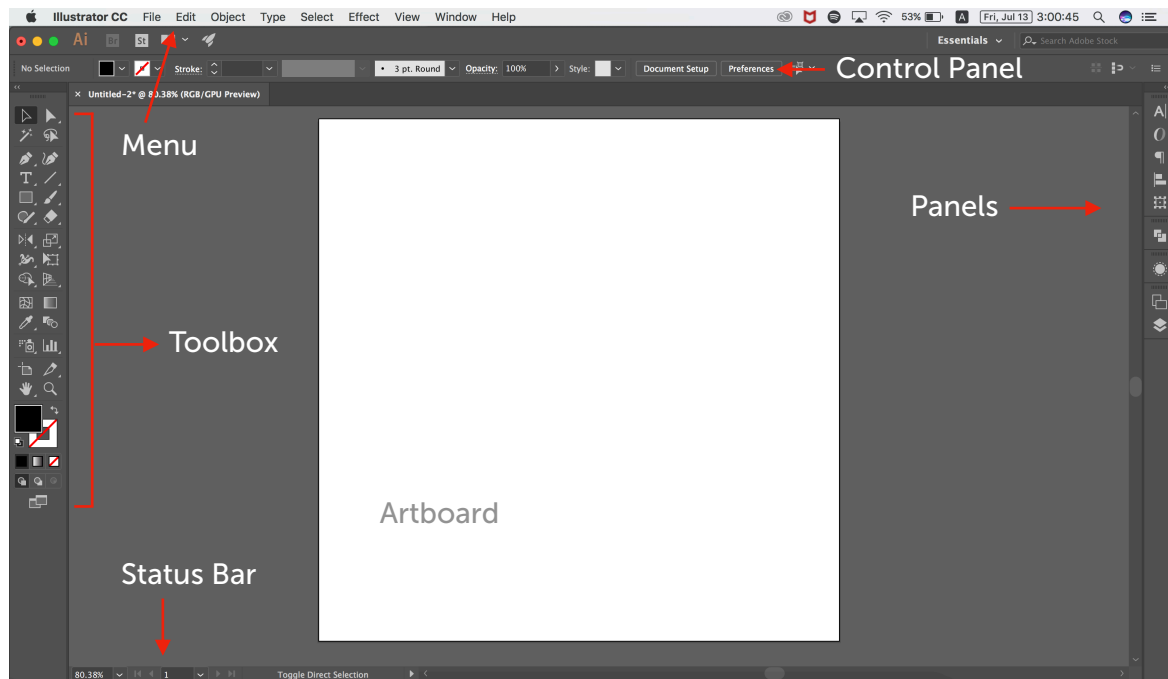
*Shortcuts:* Shift+O, Window > Artboards

**Toolbox:** Contains all tools used to create artwork. Most tools have keyboard shortcuts, which you will most likely have memorized by the end of the semester!

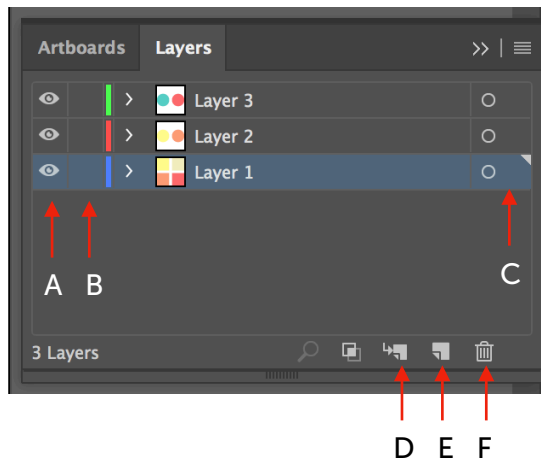
**Control Panel:** The options on this panel will change depending on which tool you are using. Allows you to quickly adjust and change settings for the current tool

**Menu:** The main menu bar with all of Illustrator’s settings, tools, etc.

**Panels (customizable):** Contains various panels that allow you to edit features such as color, stroke weight, style, etc. This area is customizable and you can add panels according to what you use most.

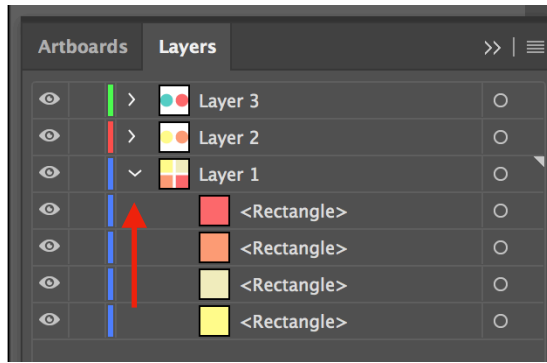


**Layers:** Layers are extremely important for organizing your work. When you first open a document, every object you create is contained in one layer (Layer 1 in Layer Panel), but you can rearrange and move objects around into new layers as you work. For your own benefit, **it is very important to organize and keep track of your layers!**



- A. Visibility:** Toggle visibility for layers.
- B. Locking:** Toggle lock/unlock for layers. Locking a layer means that you cannot click on/edit any of the objects on the layer.
- C. Selection Column:** Indicates whether items are selected. If any object in a layer is selected, a colored square will appear in this column.

- D. Create Sublayer:** Creates another layer inside the selected layer.
- E. Create New Layer:** Creates a new layer on top of the selected layer.
- F. Delete Layer:** Deletes selected layer.



If there are objects in a layer, a triangle will appear that allows you to open the layer and view its contents.

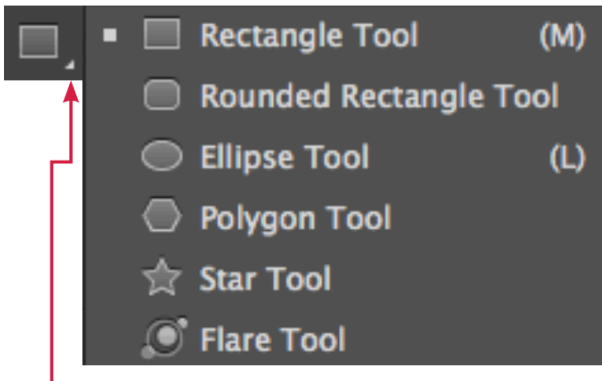
## Basic Tools



**Selection Tool:** Used to select, move, and resize shapes.

*Shortcut:* V

### SHAPE TOOLS:



Each shape tool can be used to create the shape specified. There are two ways to create shapes with these tools:

- 1.** Select the shape tool and click anywhere on the artboard, and then input specific dimensions for size
- 2.** Click and drag on the artboard to size the shape however you want

Any tool with a small triangle in the bottom right corner can be expanded into multiple options. Click and hold the icon to display the drop-down options

*Shortcuts:*

Rectangle Tool: M

Ellipse Tool: L

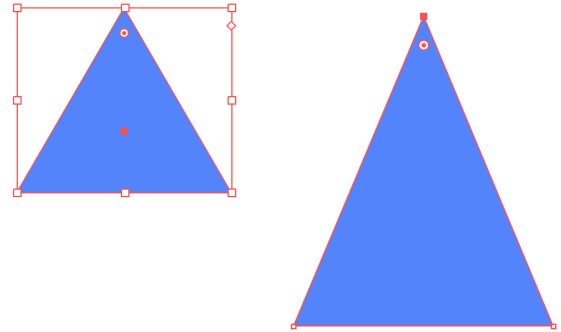


**Direct Selection Tool:** Allows you to edit objects by selecting single anchor points. To select anchor points: Click once on the shape, and then again on a single anchor point. White squares indicate the anchor point is not selected, filled in square means selected.

*Shortcut: A*

## ANCHOR POINTS

All objects in Illustrator are made up of anchor points that connect the different points in an object. You can use the direct selection tool to add, delete, and adjust anchor points in any object.

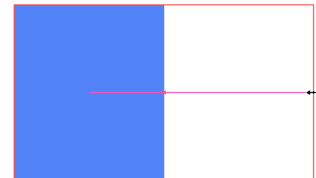


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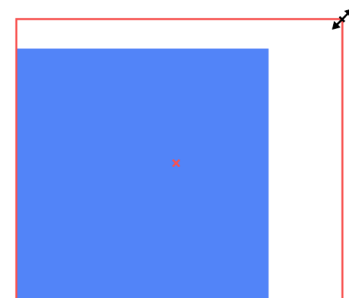
## Resizing Shapes

There are multiple ways to resize objects in Illustrator. Resizing is most often done with the Selection tool (V).

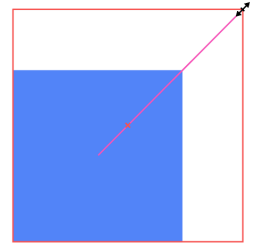
1. **Click and Drag:** Select the object and drag left, right, up, or down by using one of those four anchor points. This will elongate the object in that direction.



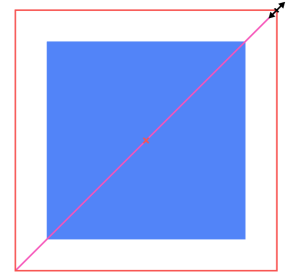
2. **Drag Diagonally:** Select the object and drag one of the four corner anchor points. This will expand the object by adjusting height and width in the direction that it is dragged.



3. **SHIFT + Click and Drag:** To constrain the proportions of your object (e.g. a perfect circle or square), hold down SHIFT as you drag. This will expand the object in that direction while maintaining its proportions.



4. **ALT/OPTION + SHIFT + Click and Drag:** This will constrain the object's proportions AND resize the object from the center. For example, if you drag out from the right side of the object, the left side will expand the same amount.

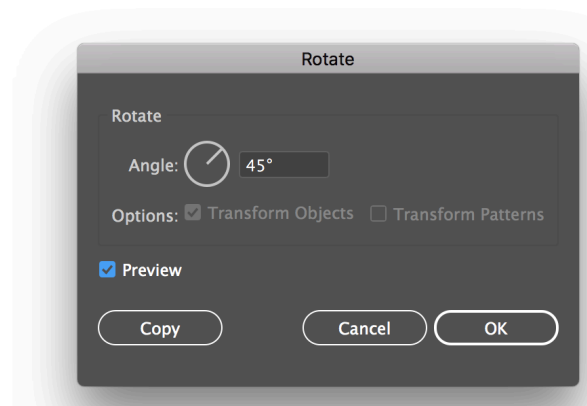
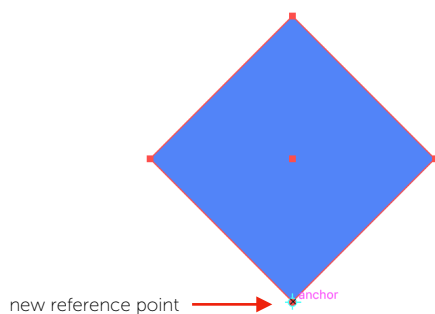


\* Note: These methods also apply when creating a shape.

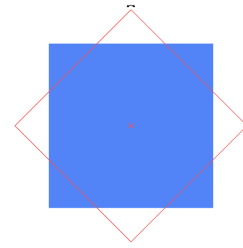
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## Rotating and Reflecting Shapes

1. **Right Click:** Select the object with Selection Tool, and then right-click and select Transform > Rotate, or Transform > Reflect, and input the desired values.
2. **Object > Transform:** Select the object with Selection Tool, and then in the menu bar, select Object > Transform > Rotate/Reflect. This will give the same dialogue box as when right clicking the object in method 1.
3. **Rotate Tool / Reflect Tool:** With the object selected, select either Rotate Tool (R) or Reflect Tool (T) from the toolbox. Click anywhere on the object to change the



reference point for rotation/reflection, and then ALT/OPTION-click on the reference point to bring up the window to input values.



4. **Selection Tool:** Select the shape using Selection Tool. Hover the cursor near the edges of the bounding box (red outline around shape) and click and drag to rotate.

\* Note: Methods 1 and 2 apply rotation and reflection across the center of the object, whereas method 3 allows you to change the reference point.

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## Duplicating Shapes

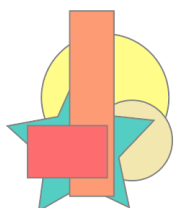
1. **Click-ALT/OPTION-Drag:** Select (V) an object. Hold down ALT/OPTION and drag the object to the desired location.
2. **Paste in Front (CMD/CTRL-F):** CMD/CTRL-C (copy), and then CMD/CTRL-F to paste a duplicate object in FRONT of the copied object.
3. **Paste in Back (CMD/CTRL-B):** CMD/CTRL-C, and then CMD/CTRL-B to paste a duplicate object BEHIND the copied object.
4. **Paste in Place (CMD/CTRL-SHIFT-V):** CMD/CTRL-C, and then CMD/CTRL-SHIFT-V to paste a duplicate object in the same location as the copied object, at the very top of the layer.

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## Arranging Objects

All examples below move the STAR. These options can be found under Object > Arrange, or right-click > Arrange

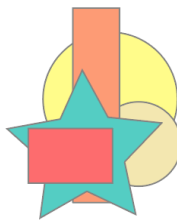
STARTING STATE



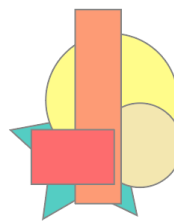
BRING TO FRONT  
*Ctrl/Cmd-Shift-]*



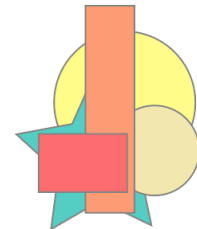
BRING FORWARD  
*Ctrl/Cmd-]*



SEND TO BACK  
*Ctrl/Cmd-Shift-[*



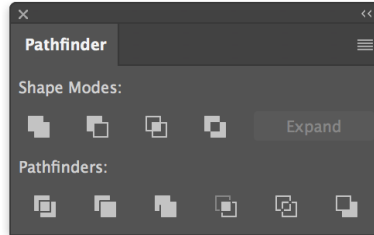
SEND BACKWARD  
*Ctrl/Cmd-[*



# Pathfinder Panel

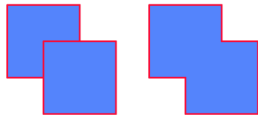
Window > Pathfinder

Pathfinder panel is used to combine basic shapes and paths to create more complex ones.



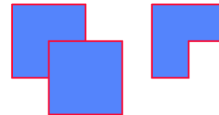
## UNITE

Combines the selected shapes



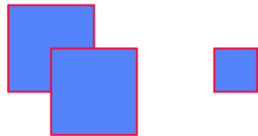
## MINUS FRONT

Subtracts the area of the top object from the bottom object



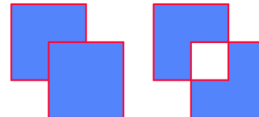
## INTERSECT

Only keeps the section where the selected shapes overlap.



## EXCLUDE

Opposite of intersect - keeps the section where the shapes do NOT overlap



## DIVIDE

Creates new paths where selected objects overlap.



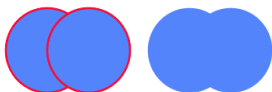
## TRIM

Removes sections of paths that overlap.



## MERGE

Similar to UNITE. Combines overlapping paths that have identical fill.



## CROP

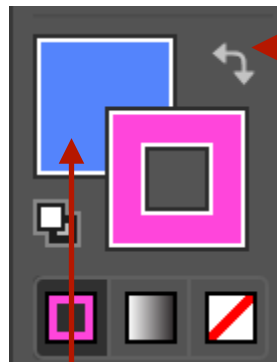
Top object serves as a frame to cut the object on the bottom.



# Fill & Stroke

Every path and object in Illustrator has a fill and stroke.

Fill and Stroke can be found in the bottom of the toolbar. When one of them is on top, it is “active”, meaning that it will be affected when color is changed. You can toggle between the two with the **keyboard shortcut X**.



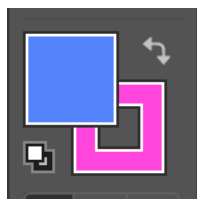
FILL

STROKE

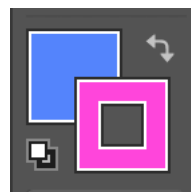
Clicking this will switch the stroke and the fill. In the circle, the fill would become pink, and the stroke would become blue. The shortcut for doing this is **SHIFT-X**.



When the fill is over the stroke, the fill is active, thus changing the color will affect the fill. To change the stroke, click the stroke to bring it to the front, or use the shortcut X.



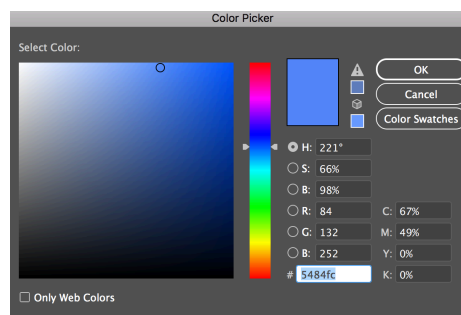
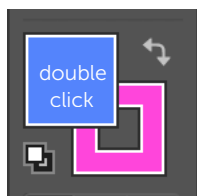
FILL IS ACTIVE



STROKE IS ACTIVE

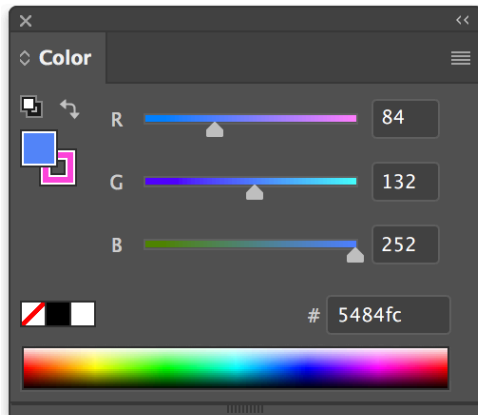
## CHANGING FILL/STROKE:

1. Double click the fill or stroke, which will bring up the color picker.

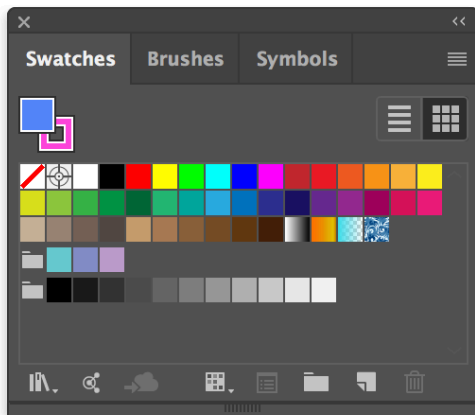




2. Open the Color Panel by going to Window > Color, and adjust the colors by changing the values for CMYK or RGB. (We'll go over color profiles more in later lessons).



3. Open the Swatches Panel by going to Window > Swatches. This will open the default Illustration colors. You can also view other swatch libraries and create your own.



Click here to access more swatch libraries.

## NONE FILL/STROKE



It is also possible to make the fill or stroke "None". **This does not mean the fill/stroke is white.** Basically, it means the stroke/fill will become nonexistent. The shortcut to make a fill or stroke None is / (forward slash).