



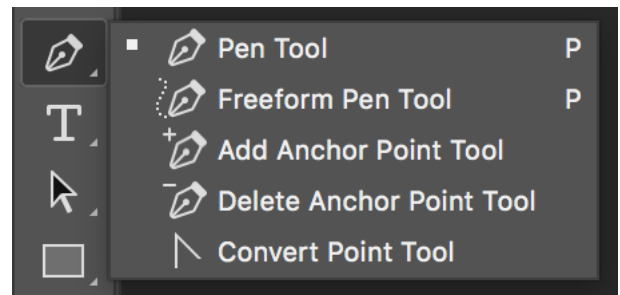
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The Pen Tool

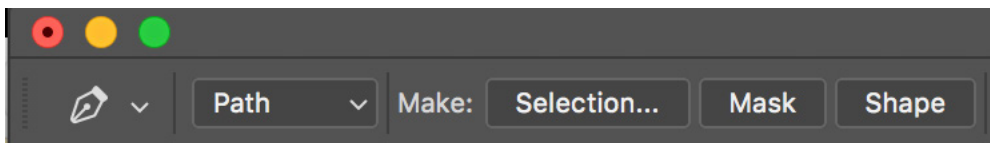
The Pen Tool in Photoshop

In this lesson, we're going to cover the basics of the Pen Tool in Photoshop. The Pen Tool can be used to draw shapes, select objects or to mask a layer so that it only shows up inside a particular shape. The Pen Tool is good for defining areas that are made up of straight lines and smooth curves. It is not good for selecting things that have soft edges, fuzz or fluffy hair.

The Pen Tool can be found in the Tool Bar on the left side of the interface. If you click and hold on the Pen Tool icon, you will see that there are different versions of the tool that you can choose from. When you use the Pen Tool, you are creating a path. Once you have a path in your document, you can do one of three things with it, and these options can be found in the Options Bar above the main image window.



If you click and hold on the Pen Tool icon in the Tool Bar, you will have access to all the versions of the tool.



Once you have a path, you can use these options to tell the path what to do.

- **Selection:** This option will convert the path into a selection.
- **Mask:** Choosing this option will turn the path into a mask, attached to the active layer.
- **Shape:** This will create a shape layer out of your custom path just as if you used the Shape Tool.

The second tool hidden behind the Pen Tool icon is the Freeform Pen Tool. When activated, you can use this tool to click and drag out a shape in a similar way that you would use the Lasso Tool. As long as you let go of your mouse button in the same place that you started, you will end up with a closed path. While this may be the easiest of the Pen Tool options, I find I use this one the least.

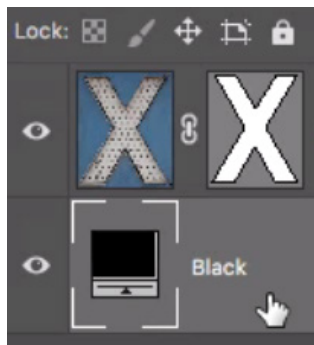
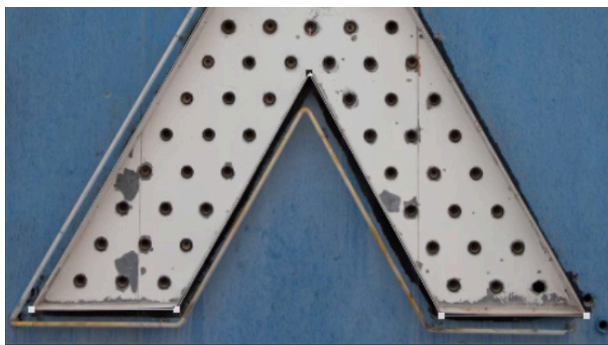
The version of the tool that I use the most is the regular old Pen Tool, and this is the top option as well as the default option for the tool.

Creating a shape made of straight lines The simplest kind of path to create is one that is made up of all straight lines. With the Pen Tool active, click in your document to add a point. Then click somewhere else to create a second point



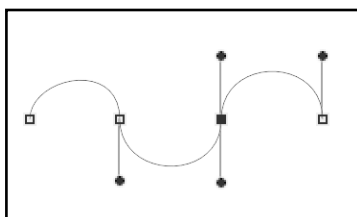
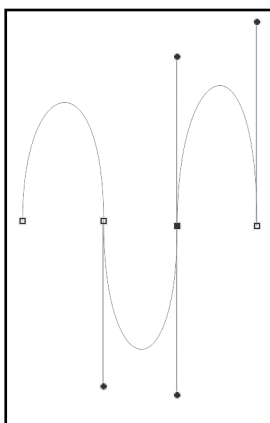
The circle icon appears next to the cursor when you're about to close the path.

with a straight line connecting them. Keep clicking to add points, creating the shape you desire. In order to create a finished, closed path, you will need to click back in the same place that you started. When you hover your cursor over that place, your cursor will get a little circle icon next to it, indicating that you are about to close the path.



Here is an example of when a straight-lined path is very useful. I wanted to mask everything except for the X in this layer. I used the Pen Tool to make a path around the X and then I chose Mask from the choices in the Options Bar.

Creating a shape made of curved lines If you click and drag with the Pen Tool, you will create a point with handles attached to it. These handles determine what direction the line will travel in when it moves away from the point. When creating a path for a curved object, you want to think about the different curves that the object is made out of. The points should be placed in the areas where one curve transitions into another curve and you would click and drag, placing points with handles in each of these areas. The length of the handle will determine how strongly it influences the direction of the line. A short handle will force the line to follow that direction for a short distance.

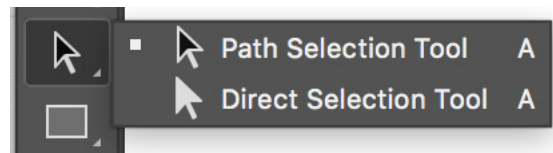


The length of the handles determine how strongly they influence the direction of the curve.

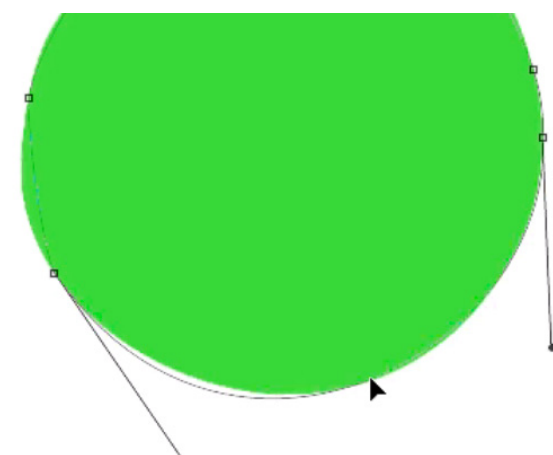
The points should be placed in the areas where one curve transitions into another curve and you would click and drag, placing points with handles in each of these areas. The length of the handle will determine how strongly it influences the direction of the line. A short handle will force the line to follow that direction for a short distance.

A long handle will force the line to follow that direction for a longer distance before deviating toward the next point.

It takes a little while to get used to knowing how long the handles should be. The following technique will help with that. The Direct Selection Tool can be found in the Tool Bar and it is designed to modify a path that you've already created. You can use it to click on the different points to make the handles re-appear so that you can modify them or you can use it to click and drag on the path itself. When dragging on the path itself, it will automatically change the length and angle of the handles on either side of the path segment. I like that this changes the length of the handles, but I don't want this to change the angles of the handles. I can specify this by turning on the "Constrain Path Dragging" check box in the Options Bar (when the Direct Selection Tool is active). If I do this, I can quickly create a path



The Direct Selection Tool can be found hidden behind the Path Selection Tool.



The Direct Selection Tool is used to drag the curve into the best position.

and then drag all of the curve segments to fine-tune how long the handles are, therefore perfecting the curve. If a curve is still slightly off, it means that you will have to adjust the direction of the handles.

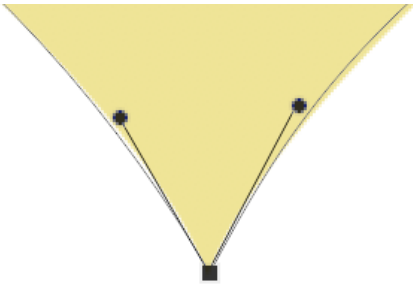
You can access the Direct Selection tool while you're in the Pen Tool by holding down the Command key (Ctrl on Win). The entire time you have the Command key held down, you will be using the Direct Selection Tool. When you let go, you will get the Pen Tool again.

If you have a path that's already completed, you may find that you need to add a point in order to change or fine-tune the path. With the Pen Tool active, hover your cursor over the path. You will see a little plus (+) symbol appear next to the cursor and this means that you can click on the path to add a new point. You can then hold down the Command key to access the Direct Selection Tool to adjust the handles of the new point.



The plus symbol indicates that you can add a point to the curve.

Creating a path with abrupt corners When you click and drag, you get handles that come out of both sides of the point, creating a smooth curve. If you need to create a sharp angle, activate the Convert Point Tool, which can be found behind the Pen Tool icon in the Tool Bar. With the Convert Point Tool active, you can click and drag on the handles to move them independently of each other and create a sharp, angled transition in the path. To change a point that has a sharp angle and make it smooth again, use the Convert Point Tool to click on the point and drag out new handles.

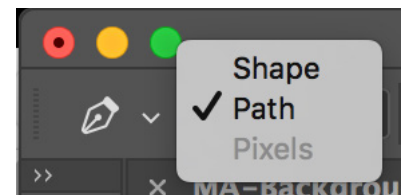


The Convert Point Tool will allow you to move the handles independently of each other, creating a sharp angle instead of a smooth curve.

Note that you don't have to manually use the menu to access the Convert Point Tool. There is an easy way to access it while using the Pen Tool. With the Pen Tool active, hold down the Option key (Alt on Win) to temporarily access the Convert Point Tool. The entire time you have the Option key held down, you will be using the Convert Point Tool. When you release the key, it will switch back to the Pen Tool. This makes it very easy to create both curved lines and sharp edges while creating a shape with the Pen Tool.

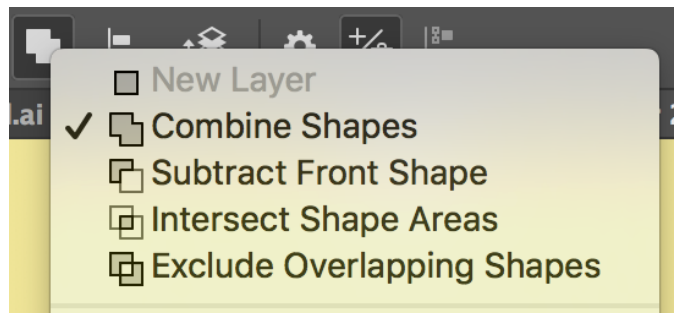
Sometimes, you will need your path to have a curve on one side of a point and a straight line on the other side of the point. With a point that has two handles creating a smooth curve, hold down the Option key (Alt on Win) to temporarily access the Convert Point Tool and click once on the point. This will remove the handle on the open end of the path. To create a handle on a point that doesn't have one already, hold down the Option key while you click on the point and drag out a handle.

Pen Tool Options In the Options Bar, there is a menu on the left side where you can decide whether you want to use the Pen Tool to create a Shape or a Path. I usually keep this set to Path. The options next to "Make:" will tell Photoshop what to do with your path. You can take a path and convert it into a selection, apply it as a mask or create a shape layer from it.



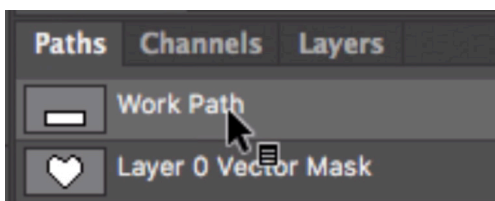
With the Pen Tool active, you can decide whether you want to use it to create a Shape or a Path.

The icon that looks like two overlapping squares will give you a menu where you can choose what happens if you draw an additional shape while the previous shape/path is still active. For example, if you choose the Subtract option, the current shape will create a hole in the previous shape in the areas where the two overlap.



This menu will determine how two paths will interact with each other.

The Paths Panel After you have created a path, it will appear inside the Paths panel, which is usually hidden behind the Layers panel. If the Paths panel is not visible on your screen, you can access it by going to the Window menu and choosing Paths. By default, the active path will be called the Work Path, and this indicates that it's a temporary path. If you would like to make the path more permanent, so



The Paths panel can usually be found hidden behind the Layers panel.

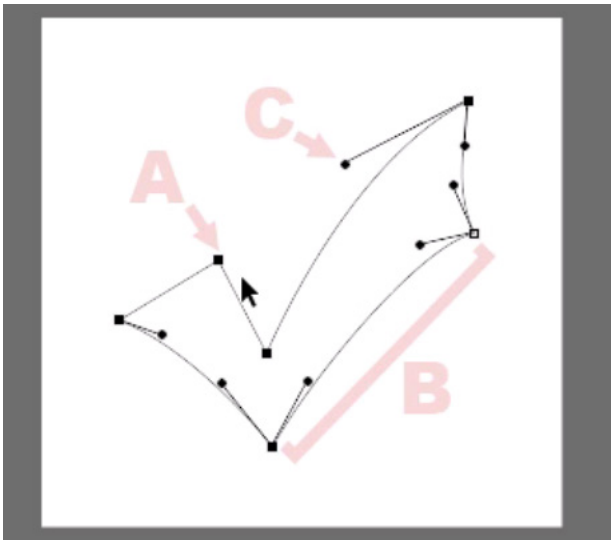
that you can hide it and then access it again later, double click on the text “Work Path” and give it a new name. This will save the path for future use and it will allow you to have a new Work Path. To work on a path that you previously saved, simply click on it in the Paths panel and it will become visible in your document.

Creating a mask from a path As we covered earlier, you can convert an active path into a layer mask by clicking the Mask button in the Options Bar at the top of the interface. When you do this, the layer mask will appear as a thumbnail next to the layer thumbnail in the Layers Panel. There will be brackets surrounding both thumbnails, indicating that both the layer and the path are active. You will still see the path in your document. To hide the path, simply click on the layer mask thumbnail to remove the brackets. Click on it again to make the path visible (and editable) again.



The path is active in the top screen shot and inactive in the bottom one.

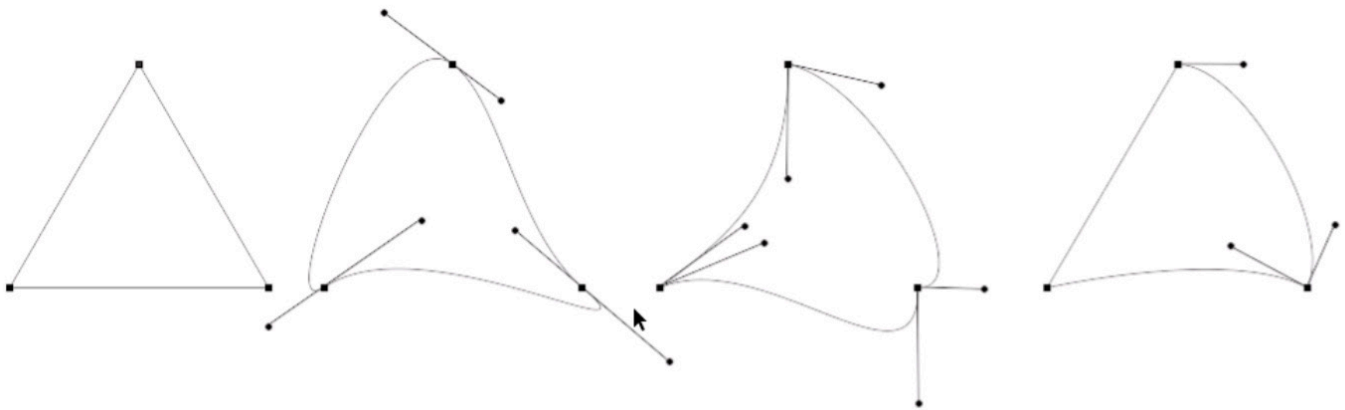
Visual Recap



A: Point

B: Path Segment

C: Handle



A path made up of points with no handles

A path made up of points with handles creating one smooth, continuous line.

A path made up of points with handles that create curves but point in different directions, creating abrupt transitions.

A path that combines different types of handles that create different types of transitions.